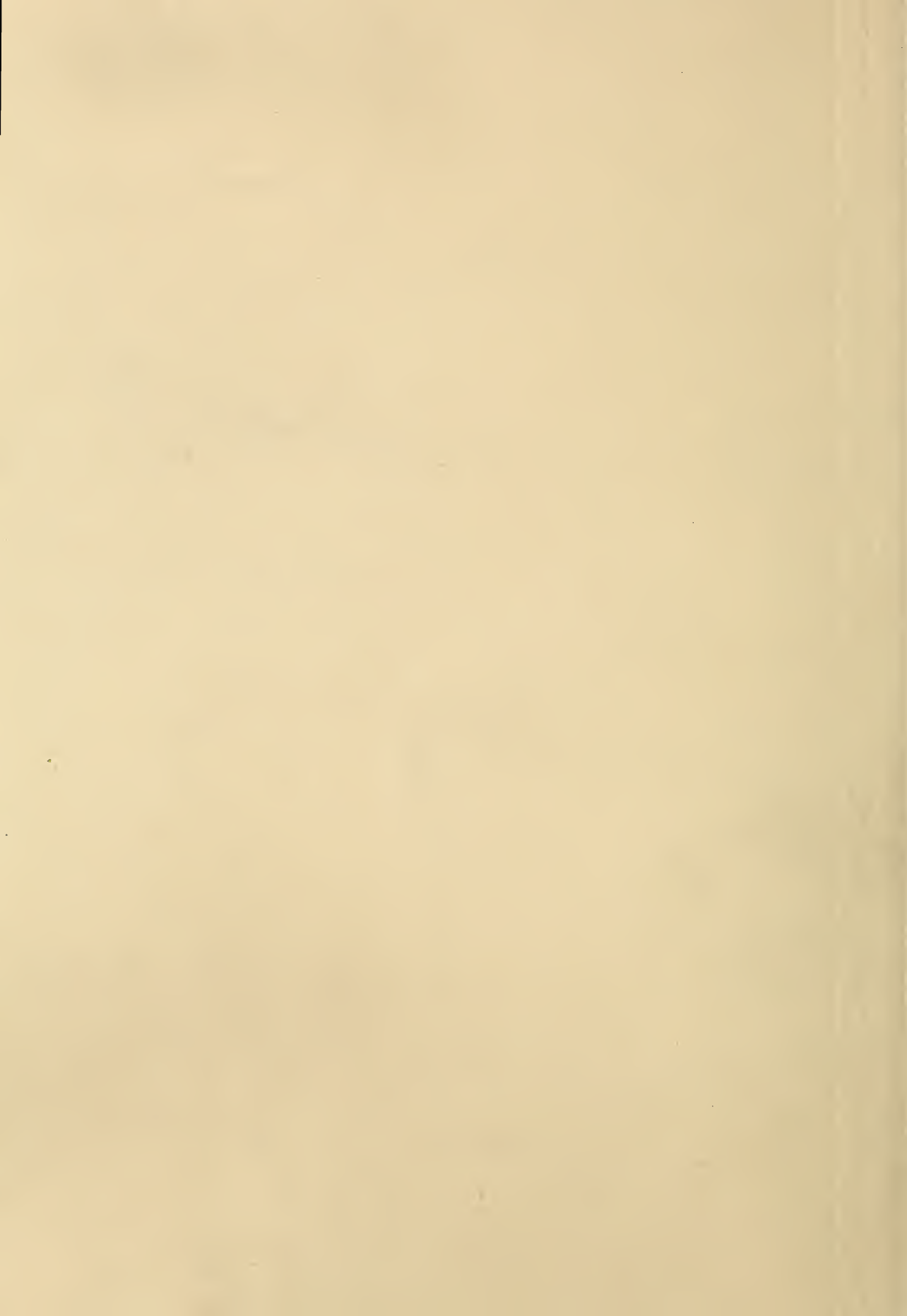


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VOL. XVIII. NO. 7.

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U.S. DEPARTMENT OF AGRICULTURE

PEACE ON EARTH
GOOD WILL TOWARD MEN

GLEANINGS IN BEE CULTURE

DEVOTED
TO

& HOME INTERESTS.

MEDINA, OHIO

BY

AL ROOT

TERMS, ONE DOLLAR PER YEAR.

ENTERED AT THE POSTOFFICE, MEDINA, OHIO, AS SECOND-CLASS MATTER.

GLEANINGS IN BEE CULTURE.

ADVERTISEMENTS.

We require that every advertiser satisfy us of responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them. Patent-medicine advertisements, and others of a like nature, can not be inserted at any price.

Rates for Advertisements.

All advertisements will be inserted at the rate of 20 cents per line, Nonpareil space, each insertion; 12 lines of Nonpareil space make 1 inch. Discounts will be made as follows:

On 10 lines and upward, 3 insertions, 5 per cent; 6 insertions, 10 per cent; 9 insertions, 15 per cent; 12 insertions or more, 20 per cent; 24 insertions or more, 25 per cent.

On 48 lines (½ column) and upward, 1 insertion, 5 per cent; 3 insertions, 10 per cent; 6 insertions, 15 per cent; 9 insertions, 20 per cent; 12 insertions, or more, 25 per cent; 24 insertions or more, 33½ per cent.

On 96 lines (whole column) and upward, 1 insertion, 10 per cent; 3 insertions, 15 per cent; 6 insertions, 20 per cent; 9 insertions, 25 per cent; 12 insertions, or more, 33½ per cent; 24 insertions or more, 40 per cent.

On 192 lines (whole page), 1 insertion, 15 per cent; 3 insertions, 20 per cent; 6 insertions, 25 per cent; 9 insertions, 30 per cent; 12 insertions or more, 40 per cent; 24 insertions or more, 50 per cent.

No additional discount for electrotype advertisements.

A. I. Root.

CLUBBING LIST.

We will send GLEANINGS—

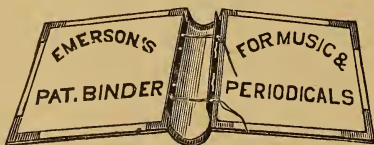
With the American Bee-Journal, W'y	(\$1.00)	\$1.75
With the Canadian Bee Journal, W'y	(75)	1.65
With the Bee Hive,	(30)	1.20
With the Bee-Keepers' Review,	(50)	1.40
With the British Bee-Journal,	(1.50)	2.40
With all of the above journals,		5.50
With American Apiculturist,	(75)	1.70
With Bee-Keepers' Advance and Poultryman's Journal,	(50)	1.45
With American Agriculturist,	(\$1.50)	2.25
With American Garden,	(2.00)	2.60
With Prairie Farmer,	(1.50)	2.35
With Rural New-Yorker,	(2.00)	2.90
With Farm Journal,	(50)	1.20
With Scientific American,	(3.00)	3.75
With Ohio Farmer,	(1.00)	1.90
With Popular Gardening,	(1.00)	1.85
With U. S. Official Postal Guide,	(1.50)	2.25
With Sunday-School Times, weekly,	(1.50)	1.75
With Drainage and Farm Journal,	(1.00)	1.75
With Illustrated Home Journal,	(1.00)	1.75
With Orchard and Garden,	(50)	1.40
With Cosmopolitan, (new sub. to Cos.)	(2.40)	2.40

[Above Rates include all Postage in U. S. and Canada.]

BEES

16tfdb

SEND for a free sample copy of the BEE JOURNAL—16-page Weekly at \$1 a year—the oldest, largest and cheapest Weekly bee-paper. Address **BEE JOURNAL, Chicago, Ill.**



You can not look over the back No's of GLEANINGS, or any other periodical with satisfaction, unless they are in some kind of a binder. Who has not said—"Dear me, what a bother—I must have last month's journal and it is nowhere to be found?" Put each No. in the Emerson binder as soon as it comes, and you can sit down happy, any time you wish to find anything you may have previously seen, even though it were months ago.

Binders for GLEANINGS (will hold them for one year) gilt lettered, for 60 cts.; by mail, 12 cts. extra. Ten, \$5.00; 100, \$45.00. Table of prices of binders for any periodical, mailed on application. Send in your orders.

A. I. ROOT, Medina, Ohio.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or \$2.00 per annum, when given once a month, or \$4.00 per year if given in every issue.

Untested Queens

FOR \$1.00 FROM JULY 1ST TILL NOV. 1ST.

Names inserted in this department the first time without charge. After, 20c each insertion, or \$2.00 per year.

Those whose names appear below agree to furnish Italian queens for \$1.00 each, under the following conditions: No guarantee to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable. Bear in mind, that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen-mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for \$1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.

*H. H. Brown, Light Street, Col. Co., Pa. 7tfdb89

*Paul L. Viallon, Bayou Goula, La. 7tfdb89

*S. F. Newman, Norwalk, Huron Co., O. 7tfdb89

*Jos. Byrne, Ward's Creek, East Baton Rouge 74tfdb Par., La.

C. C. Vaughn, Columbia, Tenn. 21tfdb88

Wm. L. Ashe, Edwardsville, Mad. Co., Ill. 11tfdb88

J. M. Jenkins, Wetumpka, Ala. 9tfdb89

*Oliver Hoover & Co., Snyderstown, Northum- 17tfdb89

Abbott L. Swinson, Goldsboro, Wayne Co., N. C. 5tfdb

C. R. Mitchell, Birmingham, Jeff. Co., Ala. 9tfdb89

E. Burke, Vincennes, Knox Co., Ind. 9-8-1890

N. A. Knapp, Rochester, Lorain Co., O. 15tfdb89

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.

P. L. Viallon, Bayou Goula, Iberville Par., La 7tfdb89

C. W. Costellow, Waterboro, York Co., Me. 7tfdb89

R. B. Leahy, Higginsville, La. Co., Mo. 21tfdb88

J. M. Jenkins, Wetumpka, Ala. 9tfdb89

W. T. Falconer Mfg. Co., Jamestown, N. Y. 11tfdb

F. C. Erkel, La Sueur, La Sueur Co., Minn. 7-9-11d

RARE! NOVEL! GOOD! CHEAP!



A meritorious novelty, white as snow, first-rate eating, easily grown and kept, wonderfully productive. Free catalogue has fuller description of it, and prices (low) of Novelties and standards in SEEDS and PLANTS, also QUEENS. Send 30c for 5 tubers of STACHYS, as above; a root of the beautiful fragrant CINNAMON VINE, which grows up rapidly each spring; a packet of POWELL'S, the most productive pole bean; of HONEY, a choice sweet corn; of FLOWER SEEDS, over 100 varieties, mixed, and a small tuber of POUTATUCK, a fine new early potato. All postpaid for only 30c. Five collections for \$1.00.

CHRISTIAN WECKESSER, Marshallville, O.

Mention this paper.

6-1d

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THE CANADIAN

Bee Journal

Poultry Journal

Edited by D. A. Jones. Edited by W. C. G. Peter.

75c. Per Year.

75c. Per Year.

These are published separately, alternate weeks, and are edited by live practical men, and contributed to by the best writers. Both Journals are interesting, and are alike valuable to the expert and amateur. Sample copies free. Both Journals one year to one address \$1. Until June 1st we will send either Journal on trial trip for 6 months for 25 cts.

The D. A. Jones Co., Ltd., Beeton, Ont.

INDUSTRIAL HIVES.

We manufacture hives with latest and best improvements. The **LYMAN INVERTIBLE** and **CLARK UNION** brood-frames are united with Sectional honey-boards. Do not stock up with old-style goods before sending for descriptive list. Sample hive, complete, \$2.35, or frame, postpaid, 25 cts. Fine Italian queens, etc., etc.

-d J. W. CLARK, Clarksburg, Mo.

In responding to this advertisement mention GLEANINGS.

Albino and Italian Queens and Bees

For 1890. I am prepared to furnish a large quantity of either variety; but if you should ask for the best, The reply, Albino, I! if you should ask why, I will refer you to the many that cry, "Albino for I." In my circular you can see why. Address

S. VALENTINE, Hagerstown, Washington Co., Md.

7-9d

24 COLONIES ITALIAN BEES for sale in good condition, on Langstroth frames, in shipping-boxes, at \$3.00 per colony.

7-8d

WM. AMELANG, Ottumwa, Wapello Co., Iowa.

ITALIAN EARLY QUEENS

1 Untested queen, April	\$1.00.	May, \$1.00.
3 " " "	3 00.	" 2.50.
1 Tested " " "	2 00.	" 2.00.

Special discounts to dealers. Safe arrival guaranteed.

W. J. ELLISON,

7-8 9d Stateburg, Sumter Co., S. C.

In responding to this advertisement mention GLEANINGS.

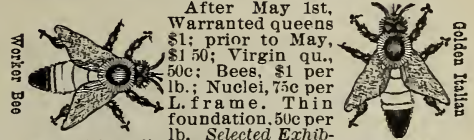
FOR SALE.

A fine lot of spider, or Grayson Lily Bulbs, which I will sell. Small bulbs 25c, large ones 50c. Very beautiful and fragrant, pure white. I also have 40 or 50 stands of mostly Italian bees for sale. Will sell Queens in April. Would exchange bees for registered Jersey heifer.

4-9db

S. G. WOOD, BIRMINGHAM, JEFF. CO., ALA.

1884. TAR-HEEL APIARIES. 1889.



After May 1st, Warranted queens \$1; prior to May, \$1.50; Virgin qu., 50c; Bees, \$1 per lb.; Nuclei, 75c per L. frame. Thin foundation, 50c per lb. Selected Exhibiting and Breeding Worker Bee. Queens, \$5. Sample of 4 and 5 Banded Bees, and Red Drones, 10c. Finest in the U. S. Price list free. SMALL ENGLISH YORKSHIRE PIGS! "Duke of Goldsboro, No. 861," Duchess of Goldsboro, No. 1523," "Lady Wayne, No. 1529," heads my herd-pigs; \$6 each; \$11 per pair. 6-7-9d

ABBOTT L. SWINSON, Goldsboro, N. C.

In responding to this advertisement mention GLEANINGS.

CONSIGNMENTS OF HONEY

And **BEE SWAX** solicited. Send samples, state particulars, and mark from where samples come.

6-7-8d **HOGE & PHIPPS,** 264 Willoughby Ave, Brooklyn, N. Y.

BUSINESS.

I will be prepared by April the 10th to ship untested queens bred from my fine strain of non-swarmer Italians. These bees are gentle, prolific, and fine honey-gatherers. Satisfaction and safe arrival guaranteed. If by chance a queen should prove not good I will gladly replace her when notified of the fact.

6-7-8d R. B. WILLIAMS, Box 72, Winchester, Tenn.

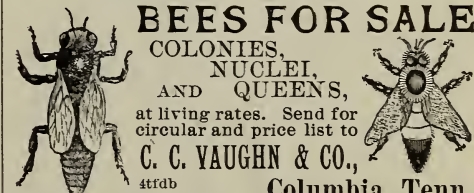
In responding to this advertisement mention GLEANINGS.

New Orleans Apiaries for 1890

Orders are now taken for early ITALIAN and CARNIOLAN guaranteed Queens. Send for price list of Best and Cheapest Apiarian Supplies offered.

Address J. W. WINDER, 572 Magazine St., N. O., La.

6tfdb In responding to this advertisement mention GLEANINGS.



6tfdb Columbia, Tenn.

In responding to this advert. ment mention GLEANINGS.

SECTIONS.

\$2.50 to \$3.50 per M. Bee-Hives and Fixtures cheap.

6tfdb **NOVELTY CO.,** Rock Falls, Illinois.

SEEDS. Don't buy your seeds or plants till you see my FREE 1890 catalog. I offer something wonderful. Send for it. F. B. MILLS, Thorn Hill, N. Y.

MUTH'S HONEY-EXTRACTOR, SQUARE GLASS HONEY-JARS,

TIN BUCKETS, BEE-HIVES, HONEY-SECTIONS, &c., &c. PERFECTION COLD-BLAST SMOKERS.

Apply to **CHAS. F. MUTH & SON,** CINCINNATI, O. P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keeper." (Mention Gleanings.) 1tfdb

Wants or Exchange Department.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale can not be inserted under this head. For such our regular rates of 20 cts. a line will be charged, and they will be put with the regular advertisements.

WANTED.—To exchange all kinds of wall paper, for honey. 1tfdb J. S. SCOVEN, Kokomo, Ind.

WANTED.—To exchange 200 colonies of bees, in S. hives, for any thing useful on plantation. 1tfdb ANTHONY OPP, Helena, Ark.

WANTED.—To exchange foundation, for beeswax. Sample on application. 5tfdb Avery's Island Apiary, Avery, La.

WANTED.—To exchange one Acme harrow, new, for Poland-China swine, either sex, or Shropshire ewes, or any thing I can use on the farm or in the apiary. LUTHER PURDY, Killbuck, O. 5tfdb

WANTED.—To exchange empty Simp. L. combs at 10 cts. each, for wax or offers. 5tfdb OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.

WANTED.—To exchange Turner and Cuthbert raspberry-plants for pure Italian queens, eggs for hatching, etc. E. R. MILLER, 5-6-7d Garden City, Cass Co., Mo.

WANTED.—To exchange one Green's solar wax-extractor, new, for an incubator or Italian queens. G. C. HUGHES, 6tfdb Pipestem, West Va.

WANTED.—To exchange this fdn. for honey. 5d C. W. DAYTON, Bradford, Ia.

WANTED.—A person of experience in bee-keeping to take charge of an apiary of fifty colonies of Italians for half the profits. Swarming begins the first of April; honey season closes the first of June. J. B. MITCHELL, 6-7d Hawkinsville, Ga.

WANTED.—To exchange a handsome male Scotch collie for Italian bees. ROBERT WALLACE, 6d Turkey, Mon. Co., N. J.

WANTED.—Help on farm, and to sare for 18 colonies of bees. State wages wanted by year or eight months. G. J. GRAY, Dell, Ore. 6-7d

WANTED.—To exchange bees and queens, for Barnes saw, Novice extractor, honey-knife, and Excelsior printing-press with 5½x9½-in. chase. 3-11d S. A. SHUCK, Liverpool, Ills.

WANTED.—To exchange Cuthbert raspberry-roots for beeswax, L. fdn., and Shaffer's Colossal raspberry-roots. M. ISBELL, 5-7d Norwich, Chenango Co., N. Y.

WANTED.—To exchange Japanese buckwheat, Root's price; Laced Wyandotte eggs \$1.00 per 13, from selected stock; also bees, for seed potatoes; early varieties preferred; Bingham smokers, or offers. F. W. DEAN, New Milford, Pa. 7d

WANTED.—To exchange a few first-class flower seeds for any kind of flowering bulbs; gladiolas, cyclamen, or lilies preferred, or any kind of flowering plants or seed that I have not got myself. J. LINGENFELTER, Akin, N. Y.

WANTED.—To sell or exchange 40 hives of Italian bees in first-class two-story Simplicity chaff hives, tin tops (Root's invention), all in excellent condition, for young stock, cattle, sheep, or hogs, or something else of value. Also hives, double nucleus, sections, foundation, or my whole apiary for sale, as may suit seller and purchaser. Location good, and a home market for honey. J. Q. A. HAUGHEY, Battle Creek, Mich. 7d

WANTED.—To exchange, a fine double-barrel B. L. shotgun for ladies' dress goods, or offers. ADOLPHUS NEWTON, Norwich, N. Y., Box 911. 7d

WANTED.—Japanese buckwheat, alsike and white clover seed, in exchange for apiarian supplies. L. J. TRIPP, Kalamazoo, Mich. 7tfdb

WANTED.—To exchange foundation at 40 and 50 c. per lb. for any quantity of nice yellow wax at 28 cts. per lb. B. CHASE, Earlville, N. Y. 7 8d

WANTED.—To correspond with parties who have a small planer to sell. GEO. RALL, 7d Frenchville, Wis.

WANTED.—To exchange bees or Italian queens for a fdn. machine. J. J. HARDY, 7d Lavonia, Ga.

WANTED.—To exchange a self-inking printing-press, chase 2½ x 4 in., outfit, cards, scrap pictures, etc. (value \$10.00), for light broad fdn. or offers. F. H. HERMAN, Tuscaloosa, Ala. 7d

WANTED.—To exchange thoroughbred poultry or eggs for a one-horse wagon, harness, or harness leather. J. M. YODER, Millsburg, O. 7d

WANTED.—To exchange Japanese buckwheat and books for apiarian supplies or offers. Write first. REV. S. ROESE, 7d Maiden Rock, Pierce Co., Wis.

WANTED.—To exchange cold-frame Cabbage Plants, J. Wakefield (March's seed) and All Seasons; cold-frame Lettuce P'ts, G. Rapids and Barr's Mam. Asparagus Roots, for bees or beeswax. Write. EDWARD B. BEEBEE, Oneida, N. Y.

WANTED.—To exchange a general-utility hand-cart, good as new. Write for particulars. A. F. BRIGHT, Mazeppa, Minn. 7tfdb

WANTED.—To exchange eggs for hatching, from imported Black Minorcas, for bees and queens. Safe arrival guaranteed. Circulars free. 7tfdb LESLIE STEWART, Jefferson, Scho. Co., N. Y.

PLY. Rocks, White and Laced Wyandotte eggs, in exchange for foundation, sections, Japanese buckwheat, or offers. Also a second-hand pony harness. T. G. ASHMEAD, Williamson, N. Y. 7-12db

WANTED.—Cherry, currant, strawberry, black-cap and blackberry stock, for extracted honey, bee-food, or offers. G. H. ASHBY, Albion, N. Y.

WANTED.—To exchange Ohio Valley wire and picket fence machines for bees and bee-supplies. Circulars free. JAS. M. MANGOLD & BRO., Moundsville, Marshall Co., W. Va.

WANTED.—To exchange a 6 x 9 self-inking press, with type, for a Barnes foot-power circular saw, and a 2-foot telescope, for 4-inch foundation rolls, or offers. L. L. ESENHOWER, Reading, Pa.

Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they want to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough to these queens to pay for buying them up and keeping them in stock; and yet it is oftentimes quite an accommodation to those who can not afford higher-priced ones.

Black queens, 3 for one dollar; also a few hybrids. 5tfdb H. HIZ HART, Avery P. O., Iberia Par., La.

35 hybrid queens for sale at 40c each, or 3 for \$1. H. H. T. KOHLENBERG, N. Brauntels, Comal Co., Texas.

To clear this country of all black blood, I will sell black and hybrid queens for 25 cts.: mismatched, for 40 cts. F. C. MORROW, Wallaceburg, Ark.

I have 6 black queens for sale at 35 cts. apiece. J. J. HARDY, Lavonia, Ga.

HONEY COLUMN.

CITY MARKETS.

KANSAS CITY.—Honey.—Demand is fair for comb, white; extracted sells slow. We quote white comb, 1-lb., at 11@12; 2 lb., 10@11; dark, 1-lb., 9@10; 2-lb., 8@9. Extracted, white, 7; dark, 5@6. *Beeswax*, none in market. **CLEMONS, CLOON & Co.,**
March 22. Kansas City, Mo.

BOSTON.—Honey.—We are all sold out of fancy 1-lb. white honey, and could sell a limited quantity at 16 cts. for something fancy. Extracted is a little slow of sale from 7½ @ 8½ cts. *Beeswax*, none on hand. **BLAKE & RILEY,**
Mar. 22. 57 Chatham St., Boston, Mass.

ST. LOUIS.—Honey.—We quote white clover honey, choice stock, 1-lb. sections, 13 @ 14 cts. Lower grades, 9 @ 11 cts.; slow sale. Extracted honey, slow sale. Southern, 5 @ 5½; choice white clover, small cans, 6½ @ 7½. *Beeswax* scarce at 23½ and 24 for choice. **W. B. WESTCOTT & Co.,**
Mar. 22. St. Louis, Mo.

DETROIT.—Honey.—Comb honey is selling slowly from 11@13 cts.; amount in sight gradually decreasing. Extracted, 7@8. *Beeswax*, scarce at 25@26. **M. H. HUNT,**
March 24. Bell Branch, Mich.

ST. LOUIS.—Honey.—Market very quiet and inactive—virtually no demand, and while prices are no lower, concession would have to be made if sales were forced. *Beeswax* in demand, and strong at 25 cts. **D. G. TUTT GROCER Co.,**
Mar. 22. St. Louis, Mo.

ALBANY.—Honey.—Receipts during the past week 39 cases. Our stock on hand is now reduced to less than one hundred cases. Demand for comb honey moderate. Extracted quite brisk; no change in prices. **C. McCULLOCH & Co.,**
Mar. 22. 339 Broadway, Albany, N. Y.

SAN FRANCISCO.—Honey.—Extracted honey quiet, 5½@½. Comb honey, 8@12. *Beeswax*, 20@23. **SCHACHT, LEMCKE & STEINER,**
Mar. 13. 16 & 18 Drum St., San Francisco, Cal.

KANSAS CITY.—Honey.—Market unchanged. We are well cleaned up on honey. **HAMBLIN & BEARSS,**
Mar. 22. Kansas City, Mo.

FOR SALE.—100 one-pint pails filled with honey, clover and basswood mixed, at 15 c. each. Delivered in Addison. **THADDEUS FISK, Lenawee Co., Mich.**

→*CHENANGO VALLEY APIARY*←

Send in your orders now for June, and try my fine yellow Italian queens, well known to many of my customers of 1889. **MRS. OLIVER COLE,**
Two-frame nucleus with queen, in June, \$2.00. Tested queen, \$1.50; untested, \$1.00. Send for circular.

Sherburne, Chenango Co., N. Y.

In responding to this advertisement mention GLEANINGS.

125 COLONIES ITALIAN BEES AT BOTTOM PRICES. **A. F. BRIGHT, Mazeppa, Minn.**
7tfdb

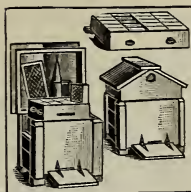
COMB FOUNDATION MILLS.

Made by **W. C. PELHAM,**
7-8-9d **Maysville, Ky.**

Italian Bees and Queens.

Tested queen, \$1.50; untested, \$1.25. Bees per lb., \$1.00. Frame of brood, 50 cts.; 3-frame nucleus, containing 2½ lbs. of bees, 2 L. frames of brood and tested queen, \$4.50. Queens reared from imported mother. Mismatched queens, 50 cts. each. Send card for price list. **Mrs. A. M. KNEELAND (nee Taylor),**
7-8d Box 77, Mulberry Grove, Bond Co., Ill.

In responding to this advertisement mention GLEANINGS.



HILTON'S Improved Chaff Hive AND T SUPER.

The pamphlet: "How I Produce Comb Honey." Price 5 cts. Send for free illustrated price list of everything needed in the apiary.

CEO. E. HILTON,
5-10db **Fremont, Mich.**

In responding to this advertisement mention GLEANINGS.

SAVE FREIGHT.

BUY YOUR SUPPLIES NEAR HOME AND SAVE FREIGHT.

We carry a complete stock of Apiarian Supplies. Our motto: Good goods and low prices. Illustrated catalogue for your name on a postal card. 23-10db

R. B. LEAHY & CO., Higginsville, Mo.

In responding to this advertisement mention GLEANINGS.

BEE-HIVES, SECTIONS, ETC.

WE make the best Bee-Hives, Shipping-Crates, Sections, etc., in the world, and sell them the cheapest. We are offering our choicest white one-piece 4¼x4¼ sections, in lots of 500, at \$3.50 per 1000.

Parties wanting more should write for special prices. No. 2 sections, \$2.00 per 1000. Catalogues free, but sent only when ordered. 1tfdb

C. B. LEWIS & CO., Watertown, Wis.

In responding to this advertisement mention GLEANINGS.

SECTIONS, \$3 PER 1000.

Foundation, Alsike clover seed, and Japanese buckwheat, cheap as the cheapest. Special prices to dealers. Send for our FREE PRICE LIST. **M. H. HUNT, Bell Branch, Mich.**

Please mention GLEANINGS.

In responding to this advertisement mention GLEANINGS.

LOOK HERE!

Bee-Keepers and Fruit-Growers, before you order your supplies for 1890, send for my catalogue and price list of **Bee-Keepers' Supplies and Strawberry Plants.** Twenty-five approved varieties grown for this season's trade. Prices reasonable. **Bees and Queens** for sale; \$1.00 queens a specialty. Address **F. W. LAMM,** 24-23db (Box 106.) **Somerville, Butler Co., Ohio.**

In responding to this advertisement mention GLEANINGS.

Ho! Ye in Dixie Land!

LEARN SOMETHING NEW

Of Interest to You in my New 1890 Catalogue

Enlarged, and prices reduced. It gives **LOW SPECIAL FREIGHT RATES** to many Southern points, especially to points in **TEXAS.**

Southern Bee-Keepers, Send for it NOW.

J. M. JENKINS, - Wetumpka, Ala.

FOR PURE ITALIAN BEES, POLAND-China Swine, White and Black Ferrets, White Rabbits, White and Brown Leghorn Chickens, and Mallard Ducks. Address **N. A. KNAPP,** 4tfdb **Rochester, Lorain Co., Ohio.**

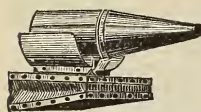
FOR SALE.

I have a saw-mandrel table, all complete, fitted for power, for \$30.00. The machine is all new, and the table is made of hard wood and oiled; the mandrel has space for four groovers, has parallel gauge figure four, cut-off gauge, and beveling platform; one 10-in. rip-saw, cut off and groovers.

B. F. STOVER, Roscoe, Ohio.

In responding to this advertisement mention GLEANINGS.

❖BEST ON EARTH❖



ELEVEN YEARS
WITHOUT A
PARALLEL, AND
THE STAND-
ARD IN EVERY
CIVILIZED
COUNTRY.



Bingham & Hetherington
Patent Uncapping-Knife,

Standard Size.

Bingham's Patent Smokers,

Six Sizes and Prices.

Doctor Smoker,	3 1/2 in.,	postpaid	... \$2.00
Conqueror "	3 "	"	... 1.75
Large "	2 1/2 "	"	... 1.50
Extra (wide shield)	2 "	"	... 1.25
Plain (narrow "	2 "	"	... 1.00
Little Wonder,	1 1/4 "	"65
Uncapping Knife....			... 1.15

Sent promptly on receipt of price. To
sell again, send for dozen and half-dozen rates.

Milledgeville, Ill., March 8, 1890.

SIRS:—Smokers received to-day, and count cor-
rectly. Am ready for orders. If others feel as I do
your trade will boom. Truly, F. A. SNELL.

Vermillion, S. Dak., Feb. 17, 1890.

SIRS:—I consider your smokers the best made for
any purpose. I have had 15 years' experience with
500 or 400 swarms of bees, and know whereof I speak.
Very truly, R. A. MORGAN.

Sarabsville, Ohio, March 12, 1890.

SIRS:—The smoker I have has done good service
since 1883. Yours truly, DANIEL BROTHERS.

Send for descriptive circular and testimonials to
Itfdd BINGHAM & HETHERINGTON, ABRONIA, MICH.

☞In responding to this advertisement mention GLEANINGS.

FOR SALE. — ITALIAN BEES & QUEENS
at a very low price. Address
6tfdd OTTO KLEINOW,
No. 150 Military Ave., Detroit, Mich.



I ARISE, TO ASK if
you want any Bees or
Queens this season. If so,
drop a postal card for Doo-
little's 1890 circular. Tested
queens from \$1.50 to \$6.00,
according to quality; bees
from \$.50 to \$7.00 per colo-
ny. Don't fail to send your
address, plainly written, for
price list, to

G. M. DOOLITTLE,
BORODINO, ONON CO., N. Y.

❖CHOICE ITALIAN QUEENS❖

Tested, \$1.50. Untested, \$1.00. Tested queens
reared in the fall of '89, \$1.50. These can be mailed
at once. MISSES S. & M. BARNES,
7-12db Picketon, Ohio.

☞In responding to this advertisement mention GLEANINGS.

Holmes Co. Poultry Yards, J. M. Yoder, Prop'r.

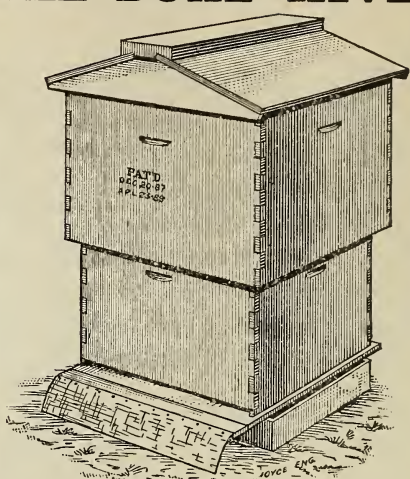
Poultry and Eggs.—I breed and sh'p the fol-
lowing Pure Bred Stock and Eggs: L. Brahmas, B.
P. Rocks, S. L. and White Wyandottes, B. B. R. and
Red Pile Games, S. C. Brown, S. C. White and R. C.
White Leghorns, W. F. B. Spanish, S. S. Hamburgs,
Golden, W. C. Black and W. C. White Polish, Ameri-
can Dominiques, Black Minorcas, Bronze Turkeys,
Pekin and Rouen Ducks. Eggs, \$2.00 per 15; \$5.00
for 45, except Turkey Eggs, 30c each.

7d J. M. YODER, Millersburg, O.

☞In responding to this advertisement mention GLEANINGS.

THE DUAL HIVE,

A PERFECT OUTDOOR WINTERING HIVE.



SWARMING ABSOLUTELY MASTERED.

AS SHOWN ABOVE,

Contains 9 brood-frames and 42 1 lb. sections — in
two tiers of supers, with one tier of sections and
super in the flat, packed in the brood hive, with
starters in the frames and sections; ready for bees;
one perforated queen-bar, Vestibule swarmer, and
the book, "Bee-key".....\$3.50.

Two hives (with flat covers), each furnished as
above, and one book for.....\$6.00.

One smoker (can be sent in the hives) extra, 50 cts.
Bee-veils, with hives, 50 or 75 cts. extra.

The book, **Bee-key**, teaches how to handle bees;
how to control swarming; how to prevent the build-
ing of drone comb without using foundation; how
to make more by raising comb honey than extract-
ed; how to winter bees; cure dysentery, and pre-
vent spring dwindling. For first orders, price 25c.

For price of hives in flat, see Mar. 15 GLEANINGS,
page 229.

Cash must accompany all orders. Send by reg-
istered letter, P. O. money order, or certified checks
to order of

F. DANZENBAKER,
1301 K St., N. W. Washington, D. C.

When more convenient, to A. I. Root, Medina, O.
☞In responding to this advertisement mention GLEANINGS.

REVIEW OUR 1890

16-page circular of bee-keepers' supplies, etc. Also
note prices of our choice strain of Italian bees. Cir-
cular free. Address JNO. NEBEL & SON,
5tfdd High Hill, Mo.

The Bee-Keepers' REVIEW

A 50-cent monthly that gives
the cream of apicultural literature;
points out errors and fallacious
ideas; and gives, each month, the
views of leading bee-keepers upon
some special topic. Three samples
free. Send for them, and learn how
to get the back numbers cheaply.

W. Z. HUTCHINSON, Flint, Mich.

MY 22D ANNUAL CATALOGUE OF ITALIAN,
CYPRIAN, and HOLY-LAND BEES, QUEENS,
NUCLEI, COLONIES, and SUPPLIES; also EGGS
FOR HATCHING, can be had by sending me your
address. H. H. BROWN, Light Street, Col. Co., Pa.

PURE P. ROCK EGGS, \$1.00 PER SET-
TING OF 13. For Sale by
6d L. C. AXTELL, Roseville, Ill.



Vol. XVIII.

APR. 1, 1890.

No. 7.

TERMS: \$1.00 PER ANNUM, IN ADVANCE; 2 Copies for \$1.50; 3 for \$2.75; 5 for \$4.00; 10 or more, 75 cts. each. Single number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.

PUBLISHED SEMI-MONTHLY BY

A. I. ROOT, MEDINA, OHIO.

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canada. To all other countries of the Universal Postal Union, 18 cts. per year extra. To all countries NOT of the U. P. U., 42 cts. per year extra.

SHIPPING-CASES—SMALL SIZE.

OUR FRIEND C. F. MUTH STRONGLY ADVISES THEM.

SHIPPING-CASES for comb honey are a very important item for the bee-keeper as well as for the dealer. The safe arrival of comb honey depends principally on the shipping-cases; and, next to the quality of the honey, it is the case that makes the sale. We had very many shipments of comb honey this season, and, as in previous seasons, there were a variety of different-sized cases. We found invariably that the smallest cases were the safest in transit, and the first sold. If it were not for the mutual interests of shipper and consignee, the disappointment, and, often, the unpleasant feeling created by the arrival of a lot of comb honey in bad condition, should be cause enough to throw aside every case unfit for shipment. As in previous seasons, we had this winter also a number of large cases containing 48 1-lb. sections, and even 48 2 lb. sections, 45 to 60 lbs. net of comb honey in a case. It is too much. A heavy case is invariably set down heavily, and a jar to one side seems to break a whole row of combs. The 24-lb. section-cases are a great deal better, but they too are too large.

By far the most practical, the safest in transit, and the most salable and the cheapest of all shipping-cases, are those containing 12 one-pound sections. We shall hereafter offer none others for sale, and recommend only such to be used by our friends and shippers. As a great many lots of comb honey pass through our hands, our opportunity of becoming acquainted with all kinds of packages is second to none; and our judgment as to the best package ought to be reliable. During the present winter we had, among perhaps a dozen, only one shipment of comb honey, 12 sections in a

case, arrive in bad condition, while almost every other shipment in large cases arrived more or less damaged. The damage in those small cases was not great, and could easily be seen, and the broken combs taken out and replaced by sound ones from another case. But nobody, unacquainted with it, can appreciate the job of overhauling a large lot of comb honey in large shipping-cases. One is at a loss to know what to do with the broken combs. So it is our candid and well-meant advice, that the large shipping-cases—go. CHAS. F. MUTH & SON. Cincinnati, O., Mar. 17.

There is a good point here, my friends—one that I have often thought of. If we put up any sort of goods in large quantities, in a single package, the danger of destruction is much greater. A whole colony of bees, with sufficient stores to last them over winter, is too heavy to ship safely, while half of the bees and half of the stores would stand transportation without trouble. Now, the same is true with shipping-cases. But I confess that I should say twelve 1-lb. sections would be going to the other extreme. The only objection is, however, there are too many pieces to handle, and the carriers are apt to get cross. It is true, a man might take one in each hand; but the average railroad man would prefer carrying 50 lbs. at once rather than 12 or even 25. It seems to me that two 12-lb. cases side by side would work better. Again, how about piling up 12-lb. cases? I have been told that much honey is damaged by being piled up in the car in such a way that it falls over or tumbles down. Your experience, however, in favor of the little cases is pretty hard to get around. I wonder somewhat that other honey-dealers and commission men have

not emphasized this matter before. I have seen some very pretty cases in the large cities, made to hold 18 or 20 sections.

ARTIFICIAL INCREASE.

FRIEND DOOLITTLE GIVES THREE WAYS.

A CORRESPONDENT wishes me to give in GLEANINGS some of the different plans used in making swarms artificially, as it is termed. In complying with this request I will give the three plans which have proved the most satisfactory with me; but before doing so I first wish to say, that, for this locality, I prefer natural swarming to any plan of artificial increase where only one swarm is allowed from each old colony, and where said swarm will issue in time to prepare both old and new colonies in good shape for the honey harvest. The first plan I will give of artificial increase is what is termed by some the "nucleus plan."

To be of the most value the nucleus should be formed eighteen or twenty days before the honey harvest, by having enough bees in it to protect a frame two-thirds full of brood, the larger part of which should hatch during the first four or five days, while said comb should contain some eggs just laid, is possible. Besides this frame of brood and bees, the nucleus should contain a frame having a pound or two of honey in it, the whole being set in a hive and confined by means of a division-board. The next day after making, a mature queen-cell should be given, or newly hatched queen introduced. In about ten days, if all proves favorable, the young queen will be laying, when I go to the hive from which I formed the nucleus, and select a frame of brood, nearly all of which are gnawing out of the cells, and add this to the nucleus, always putting a frame of comb or comb foundation into the old colony to take the place of the one taken out, otherwise too much drone comb would be built; for colonies that are allowed to build comb under these conditions nearly always build drone comb. I now wait four or five days, when I go to the old colony and take out four frames of brood, from which all the bees are shaken as they were from the last-mentioned comb, when I carry them to the nucleus. I now fill out each hive with empty comb of foundation, and put on the surplus arrangement. By the above each colony is made of about equal strength, and the brood is so taken out of the old hive that the colony does not have a desire to swarm. This old colony will have the most field-bees for the first week or so, but the other will soon make the stronger colony of the two.

THE SECOND PLAN.

My second plan is to make one colony from each old one, on the principle of division of bees instead of division of brood, as in the above case. In using this plan we must have queen-cells nearly mature by the time our first colonies are preparing to swarm. Having such cells on hand, I go to a colony preparing to swarm, or one that has its hive full of bees and brood, and move it to one side of the old location, so as to put a new hive in its place. If a hive is not full of brood and bees, do not touch it; for it is useless to try to increase bees till such is the case. I now look over the combs till I find the one having the queen on it, when I place said comb in the new hive. I next give them a frame having some honey in it, and then fill out the hive with

empty comb or foundation, when about two-thirds of the bees in the old hive are shaken in front of the new hive and allowed to run in. After this I arrange the frames back in the old hive, putting a division-board in place of the frames taken out, when the old hive is carried to a new location where I wish it to remain. After the bees thus removed have become reconciled to their queenless condition I give them one of the nearly matured cells, or a virgin queen which will soon be laying. In this way I have secured my new swarm, controlled all after-swarming, and introduced my young queen, all to my liking and with but little trouble.

MY THIRD PLAN.

This is one which I use on the weaker colonies, or those which do not get ready to swarm up to ten days before the honey harvest, when I proceed to make colonies from them as follows: A hive is filled with frames of empty comb, and placed upon the stand of one of these colonies which have not swarmed, and all the boxes are taken off and placed thereon, then all the bees are shaken and brushed off their combs of brood and honey, in front of the hive, into which they will run as fast as shaken off. Thus I have a colony that is ready for the honey harvest, as they have the queen, bees, and partly filled boxes all in readiness for work. Previous to this nuclei have been started, so I have plenty of laying queens to use as I need them. I next take all the combs of brood from which the bees were brushed, except one, arranging them in the hive the bees were shaken out of, and carry them to the stand of another colony which has not swarmed. I next take the comb of brood which was left out, go to one of the nuclei, take out the frame having the laying queen on it, and place the frame of brood in its place. Take the frame—bees, queen, and all—and set it in the place left vacant for it when arranging the combs of brood. Now put on the boxes, and, having all complete, I move the colony to a new stand and set the prepared hive in its place. Thus I have a laying queen and enough of her own bees to protect her, together with a hive filled with combs of brood, and all the field-bees from the removed colony. The loss of bees to the removed colony stops the swarming impulse, and in about a week they have so regained their loss that they are ready for the boxes again. In this way I make one colony from two old ones, but have all in the best possible condition to take advantage of the honey harvest. These plans all look toward a host of bees in time for the harvest, with no desire to swarm; and thus having them gives an assurance of a large crop of honey.

G. M. DOOLITTLE.

Borodino, N. Y., Mar. 17.

Old friend, it was rather pleasant, while reading the above, to feel that you and I agree exactly, at least in all essentials, in regard to the matter of artificial increase; and I do not know that I have anything to add, unless it would be to wait until the time for natural swarms, and let the most of them swarm naturally if they would. If they do not seem disposed to do so, then divide; but as so much more honey is secured from those that do not swarm, unless I were especially anxious for increase I think I should say, as father Quinby (if I am correct) once said: "Those that swarm do well, but those that do not swarm at all do better." The number of colonies in a given locality,

however, should be considered. Where the field is good, and not enough to gather the product, the honey gathered unitedly by the old stock and the new may often exceed that from the colony that does not swarm at all. In this case it would be the other way: Those that do *not* swarm do well, but those that do swarm do *better*.

NOMENCLATURE, AGAIN.

DR. MILLER GETS US INTO MORE TROUBLE.

AND now our friend "over the border," on page 133, tries to soothe me into satisfaction with the existing status of apicultural nomenclature. Perhaps I am unnecessarily exercised, but I will take at least a little space to reply to Mr. McKnight. I suppose I must plead guilty to being "the inventor of that inappropriate phrase, T super." Mr. McKnight asks, "Is there any super in use that bears the slightest resemblance to the letter T?" No: things are not always named from their resemblance to something else. The Langstroth hive is not so named on account of its resemblance to the good old man of that name, neither is it named *movable-comb* hive on account of any resemblance, but it has the latter name because of its contents, just as the T super is so named because it contains T tins; and I can hardly believe it takes as vivid an imagination as our friend thinks, to see a resemblance between the T tin and the letter T. Hold one upside down in your hand, friend McKnight, and look at the end of it. Isn't it a pretty plain letter T? Why, the super just named itself.

Friend McKnight, you say, "It is no misnomer to call the box in which comb honey is sent to market a *case*." I didn't say it was. I don't think it is. But is it true that "case" always means the thing to ship in, and "crate" the thing on the hive, as you seem to think? That's just what I object to—the confusion in the matter, for I think your "case" is often called a "crate," and *vice versa*. Look in Heddon's book, "Success," and you will find in the index and in the body of the book, "shipping crate" and "surplus case." Even so elegant a writer as Prof. Cook tells of "shipping crates" in his Manual, although he also talks of "crates" on the hive. If we discard altogether the word "crate," I think we may without difficulty settle on "super" and "shipping-case," and possibly the latter may simply be called "case."

No, I am not reconciled to the definition of apiary as "a place where bees are kept," even with so good authority as the A B C; neither does it assist any to cite "the terms aviary, hennery," etc. An aviary is an aviary, even without a bird in it; but if you establish an out-apiary, can you say you have an apiary there before you have hauled your first colony there, or after you have taken all away?

Friend Root, in that same A B C, under the head of "Foul Brood," you say, "Having had to treat nearly one-half of our apiary," etc. Now, do you mean you treated one-half of the "place where bees are kept"? Under "Wintering," you quote Mr. Langstroth as saying, "When my apiary was managed chiefly for the sale of Italian queens." Was the "place" managed? When you say Mr. A has a larger apiary than Mr. B," do you mean Mr. A keeps his bees in a larger "place"? Does not the size of an apiary depend upon the number of colo-

nies rather than the number of square feet? Please give us a definition for apiary that shall define the word as generally used.

But the term that "exercises" me most is the name "International American Bee Association." It was adopted, I think, without discussion, and, as I thought, rather hastily. The name is too long, and sounds a good deal bigger than the society; and if shortened, as some suggest, into simply "International," the case is, if any thing, still worse. "International" suggests a union of a number of nations, and sounds altogether too "spread eagle." It seems to me that the old name, "North American," is much better.

C. C. MILLER.

Marengo, Ill.

Now, look here, doctor; I am not going to reply very much, for I do not want to get into a muss about names. Let me suggest, however, that "apiary" means the whole plant—bees, hives, and every thing else; but I still think it could be appropriately called apiary, even if every last bee should die in wintering. It will be an apiary as long as the things are left standing in just that predicament. If somebody should clear the hives all off, or stack them up in a heap, and set fire to them, then it would be an apiary no longer. As it is a subject, however, of little importance, comparatively, I think we can drop it for the present.

THE ALFALFA BOOM.

A CAUTION TO THOSE WHO EXPECT TO LEAVE GOOD HONEY PASTURAGE AT HOME FOR ALFALFA FIELDS.

Friend Root:—I notice, from time to time, mention made in GLEANINGS of alfalfa; and so far the items have been such as to give one who is unacquainted with the sections of country where alfalfa is raised, the impression that it would be a *bonanza* to just get with a good big apiary in the midst of such pasturage. I can speak of California so far as alfalfa is concerned, from actual observation, as I have made several trips here since 1875. I write as I do, more as a *warning*, to have any who might anticipate leaving a good honey pasturage in the East, fully *investigate* before taking much risk in the alfalfa boom. It seems to me, that, from what I have seen in GLEANINGS so far in regard to alfalfa, has savored a little bit of a desire to boom the localities in which the writers live, and get a little free advertising; but I know there may be exceptions. Now as to my views of this matter. 1. Alfalfa can not be successfully raised profitably, except in a warm climate, and, as a rule, it needs to be irrigated. As a general thing it is raised in localities where the *only* vegetation is from irrigation, and, consequently, not much else grows which produces honey. 2. Alfalfa is ready to *cut* about as soon as it is *nice*ly in blossom; and especially where there are such large fields of it, they are anxious to get the first crop out of the way as soon as possible, so as to get the next, and so on to the next. I have noticed a great deal, and the above seems to be the rule. 3. If a crop is left for *seed* it is usually the third one; and at that season of the year there is no dew, and the weather is very hot and dry, and a hot north wind blows a good share of the time, so that I can't see very much show for the bees to

gather honey from alfalfa with any certainty, in California at least. I have talked the matter over a good deal with bee-men here, in different localities, and they are of the same opinion—not but that alfalfa will and does produce nice honey, but it is made into hay so soon, instead of honey; and that is not all. If you want to get where your system will soon be loaded with malaria, just go and live in a locality where they raise large fields of alfalfa, and irrigate them four or five times a year.

Nordhoff, Cal., Mar. 12.

C. A. SAYRE.

Friend S., I made a good many inquiries in regard to alfalfa while I was in California, and the substance of the reports seemed to be very much as you give it. After I got home, however, and saw the statements that came from Arizona and Idaho, I felt a good deal disgusted to think that I had made such a lengthy trip and had not seen alfalfa honey at all. I am inclined to think the locality makes the difference. I am surprised at what you say about malaria. I did not know that irrigation was ever carried to such an extent as to produce any thing of the kind, especially in hot and dry regions.

MANUM TAKING A VACATION.

A VISIT WITH K. L. SMITH.

I HAVE noticed that vacations are very fashionable; and wishing to be in fashion, I decided, after preparing my bees for their long winter's rest, to take a vacation and visit some of our Vermont beekeepers of whom we hear but little through the papers. Therefore, Nov. 1st I started out with my grip-sack in one hand and camera in the other; and by the aid of horse and steam power I soon landed in the town of Fairfax, where resides one of my dearest friends, Mr. C. C. Gillette, at whose home I very pleasantly and profitably spent several days. Although Mr. Gillette is not a bee-keeper, he is an interested reader of GLEANINGS.

The next day after my arrival, Mr. G. kindly proposed to take me to the apiary of Mr. K. L. Smith, which proposition I quickly accepted, and we were soon on the road, winding our way along the banks of the beautiful Lamaille River for about two miles, with old Mount Mansfield constantly staring us in the face; and as I was just fairly enjoying the beauties and pleasures of the drive, Mr. G. reined up to a pleasantly located home. As I alighted from the carriage, a gentleman about 50 years of age stepped out of what proved to be a tin-shop and honey-room, and greeted us very cordially as I asked if this was Mr. K. L. Smith. The following conversation took place:

"Is this Mr. K. L. Smith?"

"Yes, my name is Smith."

"Well, sir, my name is Manum."

"What! Manum the bee-man?"

"Yes, sir, I keep a few bees; and as I was visiting friends so near you I thought I would call."

"I am awful glad to see you. Walk right in here gentlemen. This is my honey-house and tin-shop," said Mr. S.

"Then you are a tin-smith, a bee-smith, and a supply-smith, I conclude, Mr. Smith?"

"Yes, I am a tin-smith by trade, and I work at it when not busy with the bees; and when buying my supplies I buy a few extra, to furnish those about me who keep only a few swarms of bees."

"What are you doing here, Mr. S.? are you extracting bug-juice?"

"No; my bees did not get much of that this year. This is white honey."

"I see you have the Novice extractor. Do you like it?"

"Yes, very much. It seems to do the work very nicely."

"Is it not rather late and cool to extract honey and do a good job?"

"Yes, rather; but these are a few combs I drew out of the hives during the honey-flow, and held as a reserve to feed such colonies as might be short of winter stores, but as my bees all filled up nicely this fall, I am now extracting the honey from these reserve combs; and by keeping the room very warm, as you see it is, I have no difficulty in throwing the honey all out."

"You do not feed much sugar for winter stores, I should judge," I asked.

"No; I have never fed any sugar, as I have so far succeeded in securing honey enough for winter."

"Do you find ready sale for your honey about home?"

"Yes. I have never had any difficulty in selling all I get. This year I sell comb honey at 18 and extracted at 15 cents per lb. I put up my extracted in 5-lb. pails; and my comb honey, which is in 1-lb. sections, is put up in these small show-cases. I leave a case of honey at each of our stores, within easy reach of me, with the understanding that my price is so and so, and that I am to take back whatever is not sold. But I never have to take back any. There, you can see that these show-cases have a glass on one side, so as to show the honey to good advantage. The cover closes down tight, and is held down by a hook so no flies can get to the honey. This package seems to suit our merchants better than any other I have tried, as many will handle my honey now who would not before I used these cases."

"Mr. Smith, I believe you are taking the right course to sell your honey. If more of us would adopt this method of working up a home trade we should hear less about our city markets being glutted with honey as they are some seasons. I had thought of this same method, but have never put it into practice; but I believe I will hereafter. How many colonies of bees have you, Mr. S.?"

"I have 80 that I intend to winter."

"How long have you kept bees?"

"I commenced 16 years ago with a few box hives; and soon hearing of your Bristol I ordered one of you to try. I liked it so well that the next season I ordered 40 more and now I have 80. I also have a few Simplicity and Langstroth hives, but I like the Bristol better than either of the others, for I can winter my bees out of doors in them if I wish, which would not be safe in the single-walled hives; and, besides, the Bristol is so convenient in summer on account of so much room in the cap; and it is not so necessary to set them in the shade."

"Do you winter any of your bees indoors?"

"Yes, all that are in single-wall hives."

"Which do you prefer?"

"Well, all things considered I prefer outdoor wintering, as I get the earliest swarms from those wintered on summer stands, and I also have less spring dwindling with those wintered outdoors."

"Do you find the business profitable?"

"Yes, My bees have paid me something every

year, some years more than others. Let us go out into the apiary."

"Mr. Smith, you have a very pretty yard indeed. I see you have a high tight board fence on three sides, and a cedar hedge on the fourth side. Do you consider this high fence beneficial to the bees the year round?"

"Yes, I do. Before I built it I had much spring dwindling; but since I put up the fence I have but little, and the fence prevents the snow from drifting around and over the hives; and when we have a high wind, my hives are not blown over as they were when unprotected. And, again, as my hives can not be seen from the road, people driving past are not so afraid as they would be if they could see the hives. Therefore, taking all in all, I am well pleased with the fence."

Said I, "I should like to make a picture of your apiary, if you have no objection."

"How did he do it, pa? I didn't see him; where is it?"

"I suppose," said the father, "the picture is in that box sitting up there. Good-morning, Mr. Allen," said Mr. Smith; "you are just a little too late to have your picture taken. Mr. Manum, this is Mr. H. A. Allen, of Milton, who is also a bee-keeper."

"Mr. Manum, I have heard so much of you that I feel quite well acquainted, and perhaps you will remember that I have ordered queens of you several times; and I must say that I like your strain of dark Italians. In my opinion they are *the* bees we want for business."

"How many colonies have you, Mr. Allen?" I asked.

"I have 25, all in the Bristol hives."

"Do either of you take GLEANINGS?"

"Yes," said Mr. Smith, "both of us, and I think



K. L. SMITH'S APIARY.

"Certainly not. I should be pleased to have you do so."

I replied, "Very well; then you may stand out here among the hives, and your little son just at your right, while your daughter stands a little way further, so as not to be in the shade of the trees. By the way, Mr. Smith, I have been told that you lost your wife some years ago, and that this 14 year-old daughter does all of your housework."

"Yes, my daughter has done our work since her mother died, with what little assistance I am able to render her."

"Mr. Smith, I can truly sympathize with you, as I buried my wife nearly a year ago. You are very fortunate indeed in having so capable a daughter to look after your housework. There, now, all remain perfectly still, as I am going to expose the plate. All ready! There, all is over."

"Why, pa," said the boy, "has the man taken our picture so quick?"

"Yes, my son, I suppose he has."

it grows better and better every year. I don't see how Mr. Root can afford to publish it for \$1.00 per year, and give us two copies every month. Why! it is too cheap."

"Well, gentlemen," I said, "I am glad to have met you. I shall now have to bid you good-by, as Mr. Gillette has already waited for me a long time."

"What do you ask for those pictures, if I should want any of them?" said Mr. S.

"My price is \$2.00 for the first six, then 25 cents each."

A. E. MANUM.

Bristol, Vt., Mar. 1.

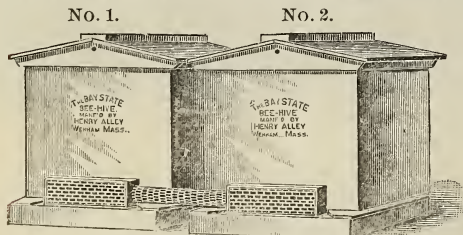
Thank you, friend M., for the compliment that you and your friends pay GLEANINGS; and may I emphasize a little moral right here? There is a promise in the Bible to those who give good measure: "Give, and it shall be given unto you; good measure, shaken down, pressed together, and running over." I do not mean by this that we shall give more than a just equivalent for the

proper price, especially for commodities that have a fixed price; but I do mean that we shall most carefully avoid giving way to the temptation to scrimp, and to be small in deal. When you receive a stated sum for a day's work, give a full honest day's work. Do not scrimp at the beginning nor at the end. If any thing, work a little longer than you bargain to do; and rather than do too little, go to the other extreme, and do a little more than is expected of you. In other words, give good measure. If you are publishing a journal, work hard to make it worth the money to every subscriber. Instead of disappointing them because of short measure, give them a pleasant surprise now and then in good measure; and in the end you will be pleasantly surprised by getting good measure back again; for does not the Bible say in that same verse, *for with the same measure that ye mete withal, it shall be measured to you again?* Now, I confess that the above looks a little bit as if I wanted to boast; but I assure you, friends, that I do not. There is a great and wonderful truth right here; and it is the *truth* I want you to look at—not A. I. Root.

AUTOMATIC SWARM-HIVERS.

THE INVENTION AND PRACTICABILITY OF.

I BELIEVE bee-keepers are always ready to be interested in and willing to invest their money in any thing that will lessen labor and enhance the profits of bee culture. Some time ago I gave a description of an automatic swarm-hiver in the *American Bee Journal*, and at the same time inserted advertisements in nearly all the bee-publications. Since then I have received hundreds of calls for a full description and particulars of the swarmer. I mention this merely to show the interest bee-keepers take in any new device applied to bee-keeping.



DESCRIPTION OF THE SWARMER.

The illustration represents the swarm hiver attached to two Bay State bee-hives. The entrance to this hive is $9\frac{3}{4}$ inches long, or wide, and $\frac{3}{4}$ of an inch high. The swarmer just fills the entrance. Now, if you examine the engraving you will see that the part through which the bees pass is nothing more than a box made of light material, having one side covered with perforated metal. Thus far the swarmer is constructed exactly like the lower section of the drone and queen trap. While the queen and drones pass into the drone-trap over the entrance, the bees and queen, when a swarm issues, are compelled to pass out at the end of the swarmer through the metal tube into the empty hive. The same arrangement that prevents the drone and queen from getting out of the drone-trap is used in

the swarmer to prevent the queen from returning to the home hive when a swarm issues.

To better illustrate the working of the swarmer, we will suppose that hive No. 1 is the full colony, and that No. 2 is the empty hive, arranged to receive the bees in case a swarm issues. When a swarm comes off, the bees rush out pell-mell, and escape through any outlet handiest to them.

Now, the experienced bee-keeper knows well that thousands of the bees, in order to escape from the hive, will be forced to pass through the tube at the end of the swarmer; and as the queen can escape in no other way, she, too, also finds it most convenient to pass through the tube; and when once in the tube she must move on to the next exit, which leaves her in the empty hive. There she must stay, as it is impossible for her to retrace her steps through the tube, as experience with the drone and queen trap has demonstrated.

While the queen is looking about for a place through which she can pass to join the bees, the swarm is flying in all directions in search of her, and in the course of a few moments the bees begin to return to the home hive.

Any one who has witnessed the return of a swarm of bees to a hive at swarming time has noticed that the bees return in great numbers and settle over a large area. They do not center at the entrance of the hive as they do when working and returning from the field.

It is understood, of course, that the swarmer catches the queen when a swarm issues. The bees miss her; and when they return, thousands of them will alight on the swarmer at the entrance of the new hive, when they at once discover their queen and readily enter and settle down to work. If only one or two bees find the queen, they give the signal to the others, and in a few minutes all the swarm will have joined her, when they can be placed in another part of the apiary. If a second swarm is desired, the arrangement should be set as in the first case. Bear in mind, that the empty hive should be placed as near the home hive as possible. The philosophy of this will be understood by all who keep bees.

It is not necessary to attach a new hive to the swarmer to catch a swarm. A box so arranged that what few bees get into it while at work can easily escape, and so arranged, also, that the bees can get into it to join their queen when a swarm issues, will do as well as a hive. The bees can be transferred to a hive at any time during the day. Later on I will illustrate this arrangement.

TO WHOM BELONGS THE CREDIT OF THIS INVENTION?

Since the swarmer was described in one of the leading bee-papers, some half a dozen persons came out and claimed it as their invention. Every one was free to acknowledge the fact, that, where I use perforated metal, *they use screen wire*; yet they claim my invention as their own. One man in Canada says he used the same thing 20 years ago. I think he is somewhat mixed on his dates, considering the fact that perforated metal was unknown to the bee-keepers of America till D. A. Jones brought it this country about ten years ago.

Wenham, Mass., March 6, 1890. HENRY ALLEY.

Inasmuch as letters and models have been coming in in regard to non-swarmer, Ernest asked friend Alley to describe his invention above; and I wish to remind our

younger readers that this whole matter of automatic swarming is old. Ever since father Quinby invented a queen-yard, toward twenty years ago, automatic machinery for hiving swarms has been again and again brought up and described—yes, and patented. Some of the inventors declared that the machines worked beautifully, and I am inclined to think they sat and watched the hives, not only hour after hour, but day after day, to see the thing “go off.” Now, although some of them have hived swarms to some extent, sooner or later all have been dropped. As I understand it, friend Alley does not claim any particular invention about it, more than substituting perforated zinc for screen wire. Furthermore, if I am correct, all the excitement so far about it is only on paper. It has never been tested in swarming time at all. The suggestion of using a light cheap box in place of a bee-hive is a good one. But this might make mischief; for if the owner did not get around to see to it, combs of honey might be built in this box. On this account I would suggest having in this cheap box a few frames of wired foundation, or empty combs.

RAMBLE NO. 22.

RAMBLER MAKES SEVERAL CALLS, AND FINALLY HAS A MISHAP.

BEFORE going another step, the Rambler would say that Shoreham has much mud after a day's rain. It is clay mud, too, of the very best kind. Ordinary mud will occasionally drop off from a person's feet. But every bit of Shoreham clay sticks with brotherly love. In our own perambulations around Bro. Larrabee's we didn't know but the whole farm would go with us. Shoreham farmers are noted for sticking to their farms, and no wonder; for a good share of a man's farm sticks to him. It's a case of mutual stickiness.

CREAM-HILL APIARY.

One cloudy morning, Bro. John proposed a visit to the Cream-Hill Apiary. The Rambler had heard of this famous apiary while on the wild and rocky



MISS WOLCOTT'S CREAM-HILL APIARY AND HONEY-HOUSE.

shores of Lake George; and from the description given, he supposed this to be the very creamiest apiary in all Vermont, both in relation to bees and people. We found, however, that it derived its name from being located near the Cream-Hill Stock Farm and Creamery, where imported Holsteins furnish the lacteal fluid.

Cream-Hill Apiary is conducted by the young veiled lady whose portrait is given on page 670, 1889—Miss Georgiana Wolcott.

This apiary was established by Miss Wolcott's father, who was a very energetic and enthusiastic apiarist; but he was taken from his family and the busy pursuits of life, to the home beyond.

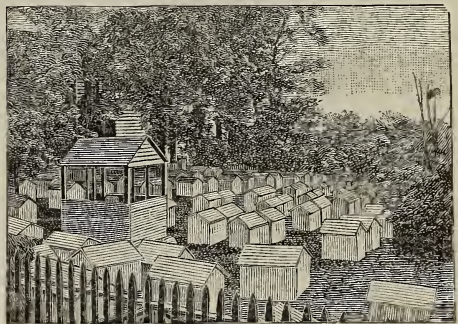
The apiary contains about 130 colonies and a pretty honey-house. The Bristol hive and clamp is used. The comb honey we saw here had a gilt-edged look, and, when crated, was marked, “Fancy,” “Choice,” and “Light Weight,” according to the quality. Among the appliances for the easy handling of swarms was a very convenient swarming-box. The swarm was hived in this box, and conveniently carried by the handles to the Bristol hive, which, when planted, is never moved.

Miss Wolcott is trying to solve the problem of mixed bee-keeping by mixing in schoolteaching, and she seems to be successful. When crowded with work, however, Mr. Holmes is near at hand to help.

Our clouds of the morning changed to dripping skies, and we rather sadly wended our way home. The steady rain pattering on the roof of the Larrabee mansion caused the Rambler to dream of milking cows in empty tin pails; and now and then, floating mistily around the chamber, would appear a bevy of school-ma'ams waving the ever-ready birch rod. The Rambler and John H. both passed a bad night. In the morning the latter was no longer genial. He had the toothache, and kicked the cat, and didn't care ducats about Cream-Hill apiaries.

THE RED, WHITE, AND BLUE APIARY.

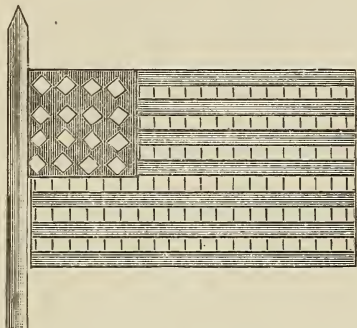
Mr. R. H. Holmes lives but a few miles from Bro. Larrabee's; and after another muddy drive we



MR. R. H. HOLMES' APIARY.

were in his yard. Mr. Holmes, we believe, devotes his entire time to honey-production, and has the care of several apiaries. He aids Miss Wolcott, and also cares for Miss Douglas' bees. In accordance with the name of his apiary, he paints his hives the colors of his country's flag. The name is original with him, as he then knew of no other apiary by that name. The Bristol hive is used, and comb honey secured. We found Mr. H. a careful workman, and his yard presented a neat appearance. A small wire-cloth house was near the center of the yard, in which to handle bees. The Given foundation-press is used, and the Rambler never saw pressed foundation made so evenly as Mr. Holmes'. We believe he uses it exclusively in his sections. Mr. Holmes puts up his honey in even-weight crates, sorting and weighing the sections before

crating. He has some demand for half-pound sections, and fills a limited number of them. His exhibit at the Vermont State Fair attracted much attention. It was gotten up in a very original manner. He carried out his "red, white, and blue" idea by making his honey-exhibit into a flag as shown in the sketch.



HOLMES' FLAG MADE OF SECTIONS OF HONEY.

The white stars and stripes are one-pound sections of honey. The rest is wood, and painted in colors.

Mr. Holmes is deacon and Sunday-school superintendent in the Congregational church at Shoreham, and is a man thought much of in the community. His home is enlivened by wife and children.

From Mr. Holmes' apiary we made a short journey to see Miss Marcia A. Douglass, ex-secretary of the Vermont Bee-keepers' Association. Though owning 30 swarms, and interested in bees and bee-journals, she is at present not a bee-keeper. Mr. Holmes keeps the bees and hives the swarms while she attends to the swarms of ladies and girls who will deck their heads out with those things called bonnets, hats, etc.

From what the Rambler saw, we should judge that the millinery store was run with the same success that the bees were. Miss Douglass regrets that circumstances compel her to keep from among the busy hum of her pets. The Rambler was ill at



RAMBLER'S MISHAP.

ease in the store among so much gaudy finery, and was constantly afraid he would smash something. We regretted to see so many birds of brilliant plumage used to decorate hats. We were told they came from tropical climes; but if every millinery shop

all over the land is stocked up with them, then millions must be killed every year to supply the demands of fashion. The Rambler got off into a reverie over the right and wrong of it.

We bade Miss Douglass farewell, and took our departure; but we knew we could not leave without a mishap. Our umbrella tried to carry off some of the fancy hats.

We envied our friend John, who seemed to bear a charmed life among so much finery. He had wonderfully recovered his geniality within the last hour; forgot his toothache, and laughed at the Rambler's predicament.

We had a slow ride in the rain and mud again, and the next morning we bade good-by to our very kind friends. We wanted to shake the mud from our feet, not in animosity, but we didn't want to carry the precious Shoreham soil away. We did, however, and some of it yet sticks to the RAMBLER.

Now, look here, old friend; Medina County has from time immemorial, had undisputed possession of the honor of being reckoned the banner county, not only in the State of Ohio, but any other State, for clay mud. The "dobe" on the mountains of California has a little advantage in being more waxy than our clay here in Medina County; but your vivid description of the Shoreham mud almost made us feel a little bit jealous. Well, we have had it for a steady six months without let-up or hindrance, and I am sure your Shoreham friends have not been favored to that extent. We are very sorry for your mishap in that millinery store, friend R. But then, if it had not been for that hook at the end of your umbrella we might not have had that glimpse of that pretty miss in trouble, shown in your sketch. Would it not be better to turn the hook of your umbrella down when you go off in a hurry, as you did there?

PEDDLING HONEY.

A GOOD ARTICLE ON THE SUBJECT.

I BEGAN with horse and buggy, going from house to house, and weighing out to each customer as I found sale for it. But that soon proved to be a slow and disagreeable business, as most customers would take only 2 or 4 pounds, and weighing out from the wagon with a spring balance was slow, uncertain, and a sticky, gummy business. I soon quit that, and began buying tin buckets that would easily hold ten pounds. I put that amount into each, and going to the merchants, the lawyers, doctors, and bankers, I would sell bucket and all, charging only a trifle for the bucket. This way was a decided improvement, but still I lost something on the buckets, and occasionally I would find a man who wanted a less quantity; so to accommodate that class, and save the loss on buckets, I went to a tin-shop and bought quart tin fruit-cans and buckets by the dozen, getting them at reduced rates. The quart tins hold 3 pounds, and cost me 4 cents each. I would sell them filled with honey at 40 cents each. I kept the quart tins back out of sight until I found a person who would not buy as much as a bucket of honey, and then I would present them, often making a sale with them where I had failed with a larger quantity.

The gallon buckets cost me by the dozen 10 cents

each; the six-quart, 15 cents; and the eight-quart, 20 cents each, and I would weigh them out to my customers as so much honey, and at the same price, 12½ cents per pound—that is, 10 pounds, bucket and all, at \$1.25. I quit going to the dwellings almost entirely, and canvassed only the business portion of the towns.

Allow me to say right here, that I worked hard and made very little money. My expenses were over \$2.00 per day, and I lived as economically as I could.

At towns where I was known, no one asked me if what I was selling was pure honey; but when I got further away from home, people began to look me in the eye and ask if that was *bee* honey. I would say in reply, "Taste and see for yourself." "Oh!" they would say, "I am told that it is made now to imitate so closely, that only a chemical analysis will show the difference. Even comb honey is made and filled by machinery so perfectly to imitate the work of the bee as to defy detection only by an expert." This is the fruit of the "Wiley lie."

I have found it more difficult to sell the comb than the extracted honey; in fact, I can sell three times as much of the extracted as I can of the comb honey, even at the same price. At Paducah, Ky., I sold at the same price, and the "strained" honey, as they called it, was taken in preference every time.

If we can, by heating and sealing up the honey, keep it from granulating, it would help things mightily; but I am opposed to putting anything into it to keep it in a liquid state. I want to say, and tell the truth, "There is *nothing* but pure honey in it." May God help us.

J. G. NANCE.

Gracey, Ky., Feb. 22, 1890.

Friend N., we have had so many reports in favor of peddling honey that I am rather glad to get one like yours, for I am sure that a great many have tried it and become discouraged. We have tried it at different times, and never made it pay expenses unless our boys took garden-stuff, fruit, or something of that sort, in connection with it. When they began to talk about comb honey made by machinery, why did you not offer them some of our reward cards to settle the matter? Amen to your concluding sentence. May God help us, not only to prosper, but to be honest. Keeping honey constantly in a liquid state, without occasional melting, is a pretty hard matter to manage.

BOTTLING HONEY.

FRIEND MOORE GIVES US SOME VALUABLE HINTS IN REGARD TO HANDLING LIQUID HONEY FOR RETAIL.

PUTTING extracted honey neatly and expeditiously into square glass jars, together with coking, labeling, and tin-foiling the same, may seem at first sight an easy task, but is in reality quite difficult. In the first place, the novice will be likely to daub, daub, daub, from first to last, unless great care is taken, and a pan of warm water and a cloth is kept handy to clean up stray bits of honey; for it is the experience of the writer that honey has a greater aptitude for getting out of place than any other known article, and causes greater annoyance when out of place. One of the greatest aids to neatness is to spread newspapers on the floor at the particular

places where honey is likely to be spilled, as between the barrel and the melting-tank, and under the faucet of the can from which we are filling, and between the melting-tank and the can that receives the honey.

Our experience has shown that it is preferable to melt honey out of barrels rather than to use tin cans, for the reason that the expense of the cans is saved, and that barrels are much safer to ship; also in melting the honey in cans (in our large boiler holding two 60 lb. cans), we find it somewhat difficult to get the exact melting-point, and to determine just when the honey must be removed to avoid discoloring or darkening it; for it may not be generally known that honey may be darkened effectually by overheating, even though water be between the honey and the fire.

A solid chunk of 60 lbs. of crystallized honey is slow to melt. In our practice we first remove the head of the barrel, then set it as close as may be to the double boiler, and shovel out the chunks of candied honey into the inner boiler until it is nearly full; then close up all as tight as possible, and subject it to a boiling heat for about one hour. Now dip out into a tin can set conveniently near, and one that is fitted with a large 1½-inch faucet or honey-gate, for removing the honey. This tin can must be elevated to a level with the upper edge of the boiler, so as to avoid spilling the honey; for this one thing we must keep in mind from beginning to end, that honey will spill and daub all over every thing if you give it half a chance. I believe a person may be driven in disgust from the bee-business as surely by daub, daub, daub, as by sting, sting, sting.

When the honey is all melted and canned, we are ready to prepare the glass jars to receive it. These square glass jars seem particularly fitted for retailing by grocers on account of the varied sizes, being 2-lb., 1-lb., ½-lb., and 5-oz. jars, retailing usually for 40, 25, 15, and 10 cts. Here the range of prices suits every one, from the mother who wants only a little for a sick child, to one who wishes a full meal for several persons. Also they are particularly desirable and acceptable to grocerymen because they make neat shelf goods, do not daub, and require no weighing to sell. These jars pack well for shipping, and economize space. In preparing the jars, first wash and reverse to drain, then take each jar and moisten one or three sides according to the size of your labels, and pass the jar to an assistant, who will stick on the gummed label easily and quickly. Gummed labels are far the best for convenience and expedition. After labeling, again reverse in a box so as to exclude dust, until needed; wash and label the entire lot of jars you need at once. This may seem an unimportant matter; but if one does not attend carefully to all the little (?) details, and invent labor-saving methods, he will be apt to find it intolerable drudgery. For instance, in rinsing the jars we dip a jar under water with one hand, while the other hand places one reversed to drip. Thus much valuable time is saved.

When ready to fill, place a tin can on its side at a convenient height, with a slide honey-gate attached. Have a box full of washed and labeled jars at your right hand, and an empty box at your left, to receive the filled jars. With practice one can fill them with great exactness, and without spilling very much. After the jars are filled, drop a cork loosely

on top of each, then take each in turn and press in the cork with the hand. A small lever-press can easily be made for this purpose. If it is found too severe on the hands.

Tinfoiling is next in order. Cut the foil in square pieces, so it will project beyond the bottle an inch on each side. Place the forefinger of the right hand on top of the tinfoil and bottle, to hold in place; with the left hand bring the two corners down so as to lap the neck of the bottle, and press the other portion down smoothly over it. The tinfoil can be easily pressed into position with the hands, and more dextrously and neatly than with any machinery. If you wish to make it very secure, moisten the neck of the jar with mucilage before applying the tinfoil. Now as to the way we tinfoil: Well, we don't tinfoil. We take beeswax 3 parts, rosin 7 parts, and tallow 1 part in 10. Heat and mix thoroughly. Dip in the filled and corked jar $\frac{3}{4}$ to 1 in.; withdraw instantly, and drip. Set away a few minutes before packing. The mixture must be quite hot, or too much adheres to the bottle. This gives an air-tight covering of a beautiful yellow color, much like the honey within.

Cleveland, O., Mar. 15.

H. F. MOORE.

Friend M., one might know by reading your article that you have had large experience in handling honey. I have sometimes wondered that other people said so little about the disagreeable feature in handling honey which you emphasize so well. I have visited bee-houses that were so daubed and stuck up that I could hardly be induced to work in them. Yes, we have had something in our own factory nearly as bad; but I think that most of the hands have learned what to expect when I find such a scene. I think likely I do scold pretty hard when I see men setting their great boots into puddles of honey, and then go all through the rooms with the honey snapping and smacking at every step. I am very much obliged to you for the hint in regard to waxing the corks. We have tried several kinds of sealing-wax, but it did not seem to answer. If the mixture described is just what we want, we shall feel exceedingly obliged to you for the information. Friend Muth has just given us a hint in regard to getting corks into bottles, especially where they are pretty large. Boil them in water, and they will become so soft they can be forced into the bottles as if they were rubber.

HONEY-STRAINERS.

FRIEND M'INTYRE TELLS US HOW THEY STRAIN HONEY BY THE TON IN CALIFORNIA.

Don't be alarmed at the heading. I mean strainers for straining extracted honey. Who has not been annoyed by a honey-strainer not working satisfactorily when in a hurry? yet no one writes about strainers. Sometimes California honey is so thick it is next to impossible to run it through cloth, or even wire cloth, without the strainer soon choking; consequently a great many devices have been invented to overcome the difficulty. I have visited many apiaries in this county, and did not find two strainers alike. Some have abandoned them altogether, and let the honey run directly from the extractor into the tank, and skim the tank every evening. Others have what might be

called a settler; it is usually a tin box about 14 inches square and 12 inches deep, with a tin partition two inches from one side, and running from the top down to within an inch of the bottom of the can. A pipe runs from that side of the can near the top to the tank; the honey passes down under the partition and up the other side, and out the pipe; but the bees, larvæ, and bits of wax, remain on or near the top, and will not pass under the partition. This works well, and will not run over if the pipe is large enough. The reasons I do not use it are, because I must either set my extractor too high to work easily, or cut a hole in the honey-house floor to let the box down; then I don't like to have 80 pounds of honey standing in my strainer all the season, especially when changing from one grade of honey to another; and it is some bother to get the honey strained that is left in the strainer. When friend Root was here he said he would like to illustrate my strainer in GLEANINGS, so I will send drawings and description.

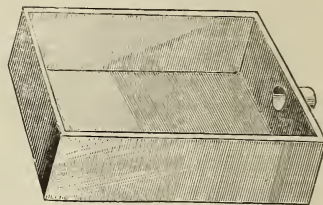


Fig. 1.

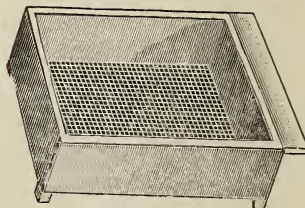


Fig. 2.

M'INTYRE'S HONEY-STRAINER.

No. 1 is a tin box 15 x 18 in. inside, 6 inches deep, with a 3 inch pipe in one end, $2\frac{1}{2}$ inches from the bottom. No. 2 is a box made of half-inch pine, 15 x 16 outside, 5 inches deep. The bottom is wire cloth, 8 meshes to the inch. A piece $\frac{1}{2}$ x 2 x 15 is nailed on one end at the top; a little block, $\frac{3}{8}$ inch cube, is nailed on each bottom corner. No. 2 sits down in No. 1, the wire cloth being held $\frac{1}{2}$ of an inch from the bottom of No. 1. As the outlet is $2\frac{1}{2}$ inches from the bottom, the wire cloth will be about $1\frac{1}{2}$ inches below the surface of the honey. The honey passes down through the wire cloth, under the end of No. 2, that has the little board nailed on, up under the little board, and out of the pipe. This strainer stands on the floor of the honey-house, and the pipe passes out through the wall to a 7-ton tank outside. The extractor and capping-box stand up 6 inches from the floor, and both empty into the strainer. The strainer has never run over. You see it is a combination of the settling and straining principles. I skim off the bees, etc., once a day, because I do not think it would be clean to leave them longer. I do not have to think about honey running over for a week after commencing to extract, as that is about the time usually taken to fill the tank. I saw some parties extracting last season, where they let the honey run into a pail; and it was

amusing to see them jump when they would forget the pail a few minutes, for fear it would be running over. They have sold their apiary to me since then. I presume the wear and tear of having to watch that pail, and work at the same time, was too much for them, so they sold out.

We have had a yard of rain this winter, up to date, and consequently expect a good honey season. J. F. MCINTYRE.

Fillmore, Cal., Jan. 27.

Friend M., you have given us just exactly what I wanted in regard to arrangements for handling honey rapidly, as you do in California. I have tried running it into a pail, and I assure you I never want any more of it. I hope some of the friends in Wisconsin whom I visited will profit by your little bit of pleasantry. When I remonstrated with them for running honey into a pail, ever so many objections were brought up against doing otherwise, such as having to lift the honey in combs if you do not lift it in the pail. My friends, you do not need to do either. Every extracting-house should have a basement. If you can not locate your honey-house on a side hill, I would make an artificial side hill, something as farmers do with their bank barns. Wheel your combs of honey up an inclined plane to the upper room, where the extractor is; or, if you choose, have your honey-tank in a sort of cellar below the floor on which the extractor stands; or have some equivalent arrangement so that your honey will run by gravity out of your way, and let it take its own time to strain and settle. The arrangement described by friend M. seems to me to be about as good as any thing we can get. Our extractors are arranged—especially the shorter ones—for running the honey directly into barrels. I feel quite satisfied, however, that a better way is to run it into a large tank first. Our cheap and simple arrangement of the cheese-cloth bag answers the purpose nicely so far as straining is concerned. The dead bees and bits of comb, etc., fall to the bottom of the bag, and the honey pushes its way through along the sides above the debris. Have several bags; and when one gets full of trash, set it away to drain while a new one is put in the bung of the barrel. If you are taking out honey in great quantities, a larger bag will be needed—possibly wire cloth will be required to give the requisite strength. I am inclined to think, however, that the honey will be clearer and nicer when strained through cheese cloth than through wire cloth.

FASTENING HIVES TOGETHER FOR HAULING.

FRIEND J. A. GREEN TELLS US HOW TO FIX THEM, SO IF YOU TIP THE WAGON OVER THE BEES DON'T GET OUT.

As the season is approaching when many beekeepers, especially those running out-apiaries, will have considerable hauling of bees to do, it may be in order to add a few words to what has already been said on the subject.

To any one running out-apiaries, or who expects to move his bees to some other locality to catch a honey-flow, it is of the greatest importance to have

some method of fastening bees in the hives, and fastening the parts of the hive together that is cheap, simple, reliable, and easily and quickly applied and removed. I hope I may be pardoned for thinking my way better than any that has yet been given.

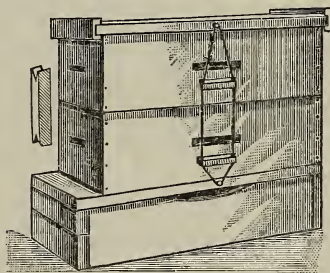
Let me say, at the start, that I would rather move bees in hives with plain square joints, if properly fastened together, than in any kind of hive in which the parts telescope together. In the square-joint hives, if there are any cracks that will let bees out they may be easily seen and stopped up, while in those with telescoping joints I have frequently found, after getting under way with a load of bees, that a crack that seemed tight allowed the bees free passage.

Your Dovetailed hive is nearly enough like mine for the same description of fastening appliances to apply to both.

Into each edge of the bottom board, just below the middle of the hive, drive an 8-penny wire nail until there is about an eighth of an inch between the head and the wood. Drive two more into the cover to correspond. With these in every cover and bottom board, every hive in the yard is ready to be fastened together securely at the rate of about half a minute to each hive.

Make a loop of stout wire—I use steel bale wire, No. 14—so that it will just slip over the nail-heads from bottom-board to cover. The wire should be spliced with a "telegraph splice;" that is, the ends should not be twisted together, or returned on themselves, but each end should pass the other and then be twisted around it.

Now take two sticks, two or three inches long, with the ends notched. Place these sticks between the wires on one side, and spread them apart until the wires are perfectly tight. If the wire is a little rusty, the sticks, or "keys," will hold better, though I have never known one to slip if properly arranged.



This makes a fastening that is entirely reliable for any ordinary handling or hauling, and by the use of a couple of nails or screws to hold the wires apart, or to keep the keys from slipping, will stand the roughest handling in shipping. Last fall I upset with a load of bees I was hauling down a steep side-hill road, the wagon turning completely upside down, and piling the hives in a miscellaneous heap. No damage was done, except the splitting of the cleats to some of the cover-boards. The frames were at fixed distances, and not a comb was broken.

In moving bees in hot weather, instead of the regular cover I use a frame covered with wire cloth. This frame is made of strips $\frac{3}{4}$ square, with a cross-bar in the middle, into which the nails are

driven. The wire cloth is tacked on top of this, leaving a space between it and the frames. For the sake of safety, a thin strip is tacked on top all around, binding the wire cloth securely. It should be so that, when the cover is laid on top, the hive is closed as perfectly as if the wire-cloth screen were not there, and no straggling bees can collect on the wire cloth. If you have many bees to move, you can prepare them a day or more beforehand, without inconveniencing the bees, leaving only the entrances to be closed, the last thing.

For closing the entrances, if wire cloth is used above there is nothing better than a plain square stick of wood, nailed or clamped over the entrance. In cooler weather, ventilation at the entrance is sufficient. To make a block for closing the entrance, take a stick of wood $\frac{3}{4}$ square, and as long as the hive is wide. Recess one side $\frac{1}{2}$ of an inch in depth, to within an inch of the ends. Now fold a strip of wire cloth in the middle, and tack it on the stick so that the folded edge is even with the projections at the ends. Nail this against the entrance. I have used screw clamps to fasten them on the hive, and like them very much, as, with them, there are no nails, tacks, or screws to be driven or drawn in fastening bees in or releasing them. The principal objection is the expense—five cents each, though they could probably be bought cheaper in quantity. They ought to be among your counter goods.

If you have but little hauling of bees to do, you may not care to have nails driven in all your covers and bottom-boards. In this case, take strips 1 x 2, and as long as your hive is wide, and drive the nails into the ends. Put one of these under the hive, and one over, and fasten as before.

DR. MILLER'S REVERSIBLE BOTTOM-BOARD.

I have been greatly interested in the discussion of Dr. Miller's reversible bottom-board. I can see many advantages in its use, and would certainly adopt it but for these objections. 1. Cost; 2. A hive on it is not so readily picked up and handled as on the ordinary bottom-board. This objection could be partially removed by cutting hand-holes in the side pieces, which would add slightly to the cost. 3. A stand, to keep it off the ground five or six inches, and at the same time keep bees from getting under it, will not hold it as securely, nor can it be removed therefrom as readily, as the ordinary style.

If my objections are not well founded, I hope their fallacy may be pointed out, as I should very much like to secure all their advantages.

Dayton, Ill., Feb. 22.

J. A. GREEN.

I am greatly interested in any thing that pertains to a cheap, simple, and reliable method of hauling bees; and, as a matter of course, I have just read your article with considerable interest. Certainly you will be pardoned for thinking that your way is the best; and, on the same grounds, I may be pardoned for thinking that *my* way is still better; for a description of which, see the department of Our Own Apiary, elsewhere. Briefly, my objections to your method of hauling bees are these: First, for convenience you drive four nails into the cover and bottom-board, and, of course, they will be sticking out during the summer, to catch somebody's unfortunate pants. Second, while it is cheap it is not as cheap as the

loops I have described elsewhere. Third, the whole tension of the wires is on two nails; and while said nails may be able to hold all the necessary strain, there are times when I think they would not, although I must confess you have put them to a pretty severe test if your wagon was turned bottom upward. I should not want to have such a catastrophe with a fractious colt. If you had had movable frames, as most beekeepers use, oh my! what a muss you would have had after arriving at your destination! Yes, sir, I think we want frames that will stay where we put them when we move bees, and not "behave like a rattlebox," as R. L. Taylor very aptly put it at the Columbus International Convention.

I believe I agree with you in what you say in regard to Dr. Miller's bottom-board. Without doubt, it has several good features; but in my estimation they are overbalanced by some of its objections.

ERNEST.

THE DUAL DOVETAILED HIVE.

WHAT LED TO THE ADOPTION OF THE DOVETAILED, OR LOCK-JOINT, CORNERS.

WHETHER I am the originator of the lock-corner bee-hive or not, I am unable to say, as I so often find others doing the same thing that I am, all unconscious of each other; but this I know: That I made the first one that I ever saw. It illustrates the common saying, "Where there is a will, there is a way." In my case it was a *want* with the will that made a way. Some men prefer horses, politics, or dogs. I have a fancy for bees. When a good friend of mine goes to Florida to look after his orange groves he takes a favorite dog for hunting. When I first went to Florida, in 1876, to be gone from my family several months, I went by steamer from Philadelphia via Savannah, that I might take with me a choice colony of Italian bees, unwilling to risk them in the care of any one. I kept them in my stateroom; but in spite of all that I could do to quiet them they kept up such a roaring as to be heard above the noise of the sea and the ship's machinery, so as to alarm the passengers in the staterooms on either side of me, who, happily, came to me to learn what was going on in my room. I explained to them I was too deathly sick to hold my head up, without doing any thing.

"What have you got in here, making such a hissing noise? Are they snakes that we hear in our rooms?"

I told them they were Italian bees.

"Won't they get out and sting you to death, and drive us all into the sea? They must be real mad. Who ever heard bees make such a noise?"

I had to explain that Italian bees never sting when properly used, and showed them that the hive was covered over with wire screen, so that they could get air, and water from a wet sponge. I begged of them to make no complaint to the captain, and they graciously assented to let them remain, as many people tolerate dogs in street-cars, who have no particular liking for them. In spite of all, three-fourths of the bees died on the trip (of a week); but what I saved cheered many a lonely hour.

By Apr. 1 I had built them up to two good colonies that I sold for \$18.00. In my subsequent trips to

Florida by rail I could not take bees in the cars. I would not risk them by express, nor endure the miseries of sea-sickness again, so that I had none there until the winter of 1884, when I wanted to take some choice bees to Florida so much that I determined to do so, rules or no rules. My friends could take their dogs on the passenger trains, and these dogs were a great deal more likely to go mad and bite somebody than my bees were to get away from me to sting anybody. I cheerfully conform to reasonable rules, but I have small respect for prejudice. For myself, I would rather risk the stings of mad bees than the bite of a glad dog.

What has this to do with the Dovetailed hive? It was the need of something light and strong, that would be safe to carry a colony of bees in, in one hand, into a passenger car. A heavy hive that it took both hands to carry would never get further than the platform. Twelve years ago I had a lot of nucleus hives made of stuff half-inch thick, with dovetailed corners, like four-piece section boxes, and glued together without nails, that are still good and strong. Thinking that hives made very thin and light would be warm enough for Florida, I had brood-hives made that weighed only 8 pounds. Eight of these were packed in my trunk, in the flat, with my clothes, and checked free, as others do guns and camp outfits.

Now for the bees: Passenger rules absolutely prohibited the carrying of lizards, toads, or bees, in the cars, that would disturb the nerves of timid travelers. I knew the alacrity with which the Pullman porter would pull those precious bees if they only buzzed; but I entertained a hope that five dollars might find them astand in the steward's pantry. Remembering the roaring racket of the bees on the ship, with wire cloth over the top of the hive I took a dovetailed body, without bottom, covered it over with wire cloth, and nailed on three strips, half an inch square, to keep it up from the floor, that they might have air from the bottom. I then caged three queens in separate pound sections, partly filled with honey, and set in combs partly filled with honey, and put in all the bees of three strong nuclei, making a good colony. I then nailed the cover on tight and fast, hoping to smother any complaints that I expected from too close confinement; next, to further deaden sound, and mask the affair from the vigilant eyes of men ever ready to bleed one for a dollar, if caught violating rules (I would rather have paid, but bees are prohibited), I wrapped the sides and top of the box in two coats of heavy paper, and fastened on straps to carry it, so that it might pass for a magic lantern, or any thing but a hive of live bees. Nothing succeeds like success. I secured a seat in the middle of the car, by my coat and valise, and waited in the cool air quietly outside until the train was ready to move, when I carried in my pets, trusting that the roaring of the train and the paper wrapping would prevent their being heard. A three-hours' run carried us (bees and me) from Wilmington, Del., to Washington, D. C., without a whimper. As they were so quiet, I carried them aside to investigate, to see whether they were yet alive. A breath blown in at the bottom brought the response, "We are all right; what's the matter with you?" After a few days we went on again to Jacksonville, Fla., and 150 miles south to Panasoffkee, Fla., most of the way in Pullman cars, and the blessed bees behaved so well that not a passenger knew that I had

bees in my (bonnet) box, so carefully wrapped up with paper.

It was 21 days from the time they were placed in the box in Delaware until I released them in Florida, when they were evenly divided among the three queens. They commenced carrying in pollen the first hour. There were only 51 dead bees. One queen began laying the second day, and the other two the third day. My intention was to put heavy boxes around the nuclei, as the nights are very cool in Florida. For want of time to do better, I wrapped old newspapers around and over the boxes, to keep them warm, and they just boomed. They were on six frames, which the queens packed with eggs. I had 3 cases of 14 sections each, filled with choice orange honey by the middle of March. Using foundation had increased them to 7 colonies by May 10. I was so impressed with the value of a small brood-nest and paper covering that I tried the same on my bees in Delaware; and the following winter I wrapped all brood-hives with several thicknesses of paper and set a larger hive over them to protect from the wind and rain, and I found it a perfect success where I lived, near Philadelphia, Pa. Every colony put up in paper has wintered successfully with me since I first began. It is safe, cheap, and free to all. I prefer it to chaff, which I had been using for 20 years. If the hive is small enough for the bees to fill it with the heat they generate, and a solid wood cover closed down *absolutely air-tight*, as they prepare it for winter when left to themselves, with several layers of paper wrapped smoothly around the outside of the brood-hive with a double quantity over the top, to retain the heat of the colony. Cover all over with tarred paper or oil cloth, or a larger hive to keep off cold winds and rain, and you can have the benefits of my method with any kind of hive. Keeping the outside dry and the inside warm, *above the condensing point*, with plenty of good sealed honey, bees will boom in time for the harvest. When you take the bees out of the cellar, wrap smoothly several layers of paper around, and twice as much on top of any brood-chamber of proper size, and cover it with any thing to keep off the rain, and you will have my mode of promoting spring breeding; but the paper must be dry; wet, it would be too cold. Not being a manufacturer of hives, I have had to depend upon others to make them for me. After trying nine different planing-mills and a near-by hive-maker (to save freight), and standing over the job to have them made as nicely as a bee-hive should be, I became so utterly disgusted that I procured a patent on my hive, that I might say who should make it. In correspondence with Mr. A. I. Root a year and a half ago, I almost offered to give him the entire thing if he would make and sell it. He answered me very kindly, that he supposed he had it in his attic; and from the new notions that are coming to him almost daily, it is no wonder that he thought so.

I packed the complete model hive (that cost me \$8.00 hand made) in my trunk, and brought it to the Home of the Honey-bees, and exposed it to the criticism of A. I. Root, E. R. Root, J. T. Calvert, and J. S. Warner—four as good judges of good bee-hive work as can be brought together. After looking over and discussing the strength of the locked corners, and the feasibility of making it, Mr. E. R. Root asked what I called it. I had no name. As there had been so many hives with grand names, I dared not venture, lest it might have been used be-

fore. I asked him to suggest one. He answered, "As it is two hives in one, I should call it a dual hive," which so aptly describes it I gladly accepted the name, and I give Mr. E. R. Root the credit. Mr. A. I. Root agreed to make the hives for me. I gave him a trial order, and they were *altogether* so much better than any that I have had made before, that I am now having 1000 hives made for myself, and can increase it if more are wanted. The lumber is good, and the work I know will be good, made by the very best of machinery by men skilled and trained to appreciate the nice fittings required to make a perfect bee-hive. Mr. A. I. Root is responsible for that.

I have two separate patents now granted, another pending, that give me the right to say who shall make it and know it is well made; and I am determined to sell them in the flat so cheap that no one need wrong themselves or me by making a poor hive; and while they are strong enough to last a life time, they are so light that they can be shipped 1000 miles for the same freight that other hives can be sent 200, so as to have them all made in one place, and all alike. I will be responsible for this.

Washington, D. C., Mar. 24. F. DANZENBAKER.

Friend D., we are glad to know that you have succeeded in carrying bees so well on the cars. Very likely the same preparation would enable them to stand the long shipments we have tried to make to Australia and the Sandwich Islands. Are we to understand that you gave them full ventilation all the time from the whole bottom? If so I am rather at a loss to understand why they did not roar or buzz as they did in your former experiment. The use of paper to keep out frost in the spring, when bees are breeding very rapidly, is old. You will find a description of it in GLEANINGS something like fifteen years ago. It was adopted by a great many at one time, and there was a good deal of enthusiasm about it; but after a while, quilts and enamel cloth took their place, and now our learned doctors (?) are talking of throwing even these aside and using only a plain flat board over the brood-combs. May be it is all right; but it reminds me every little while of what Josh Billings said: "What is the use of knowing so much when so much that you know is not true?" Never mind. You succeeded in traveling with the bees for 21 days with only 51 dead ones out of a good-sized colony.—In regard to patents, if your motive in getting them is to be sure that all the hives that are used are accurately and properly made, I do not know but that it might be a pretty good thing. But we hope we shall never see you going around among the farmers, trying to sell "individual rights."

OUR OWN APIARY.

CONDUCTED BY ERNEST R. ROOT.

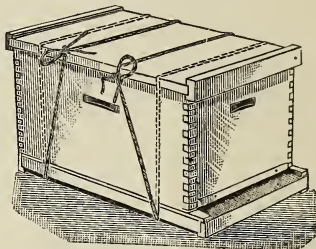
PREPARATIONS FOR HAULING BEES.

It has been some time since I inserted this department. In the mean time a few have written, wanting to know why I dropped it. Why, bless you, I have not intended to do so; but there have been so many good articles that I wanted to have inserted,

I could hardly see how I could make room for it. There has been so much inquiry in regard to moving bees, how to prepare the hives, etc., that I feel constrained to tell some of my experience, because the time is fast approaching when many of us will be moving our bees to out-apiaries.

FASTENING THE TOP AND BOTTOM-BOARD FOR HAULING.

Before telling you very much about our method I present to you forthwith an engraving which will explain the method and *modus operandi*.



DOVETAILED HIVE, PREPARED READY FOR HAULING BEES TO AN OUT-APIARY.

To save time, we first cut twice as many lengths of jute twine, $\frac{1}{4}$ inch in diameter, as we have hives to haul. These lengths will just reach around a Dovetailed hive transversely, and tie in a bow knot, in the direction of the dotted line. Now, then, with a certain number of lengths thrown over the shoulder, we proceed to a hive, lift the front up, slip one length under, draw it around the hive tight on the dotted line, and tie it. The rear is looped in like manner. Now, then, to stretch the twine taut we draw the tops of the loops toward each other, in such a way that the cord that was at first perpendicular is now stretched to the hypotenuse. After having drawn them as far as you can with your fingers, we take a hammer and drive at the angle on both sides of the cover until the diagonal part of the cord begins to sing like a fiddle-string. Now, the cord we use will hold, before breaking, about 200 lbs. With the hammer we can stretch the cord to the breaking-point if we so desire. I merely mention this to show what a tremendous pressure can be exerted. But we will not stretch it to a breaking-point, but only give it a tension of perhaps 100 lbs. on each diagonal of the cord, which would make a pressure of 400 lbs. on the cover and bottom against the body of the hive. Now, you might suppose that, after the cord is slipped from a perpendicular to a diagonal, it will have a tendency to resume the perpendicular again; but if you will try the experiment on the hive you will find that the friction is great enough to keep the cord at whatever diagonal you may drive it. While doctors Miller and Mason were here I showed them this method of fastening, and they both acknowledged its practicability and strength.

Last fall we moved the bees in the bass-wood orchard home; and before setting out with a team and platform spring wagon,

with a sort of hay-rack top, we took along with us the required number of lengths of cord. My plan was simply to tie them transversely on the hives on the dotted line as above. After having tied a few of them I saw that I could hardly make them tight enough. While I was thus engaged, Mr. Ward, our teamster, had struck upon a very ingenious plan of tightening them, and that was the method I have already described. I was very sorry that he discovered it before I did. It worked so unique that I wanted to have the honor of it. The plan is doubtless old; but then, you know there is a little fun in using a good thing yourself, even if the other fellow has the honor of first suggesting it.

We hauled, thus secured, more than 50 colonies. The bottom-board and cover would have stood ten times the amount of hard usage we gave them. Without stopping to take the hive up by the hand-holes, we grabbed hold of the cleats of the cover so that you can see that the whole weight of the hive is held by the cords. If the cover-board has any tendency to warp, the cords will very speedily draw them down again tight, so as not to leave a peeping-crack for the bees, to say nothing of the impossibility of getting out and stinging the horses.

You will see elsewhere that J. A. Green describes another method for securing the cover and bottom. Our plan, I think, is cheaper and more secure. There is no expense of wire, of V stretching strips, or danger of tearing clothing from nail-heads. Not a nail is used.

For moving in the fall or spring, it will not be necessary to use the wire-cloth screen, if the entrance is stopped with wire cloth. For summer moving, the screen can be secured with the bottom-board as above. For stopping the entrance we use a device similar to that described by Mr. Green. In the engraving, a narrow strip $\frac{1}{4}$ inch thick and $\frac{3}{4}$ wide, and of the length of the entrance, is used. To this is nailed a strip of wire cloth folded double, to give it additional stiffness. I am indebted to Dr. Miller for this suggestion. A single thickness of wire cloth sometimes may be bent just enough to let bees out. It is highly important that not a single bee escapes.

Since writing the above, Mr. Chalon Fowls, of Oberlin, Ohio, an enthusiastic and prominent bee-keeper, has been visiting at the Home of the Honey-bees. He says he would not have supposed it possible, from the description, that the method described above would hold the bottom and cover so securely. I took him out to my back yard, fastened a cover and bottom, and then asked him to test the strength. He said he had supposed the loop would slip and become loose; but he found that they stayed where they were put.

FASTENING FRAMES.

On page 551, 1889, I described our spacing-strips for fastening movable frames. Next year I propose trying frames at fixed distances, probably the Van Deusen. We have already tested them somewhat in our apiary, you will remember.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

THE FLORIDA JAY-BIRD AN ENEMY OF BEES.

Do you or any of your readers know whether the Florida jay-bird, or "scrub-jay," as some call it, is in the habit of eating bees? I never saw them eat bees till this spring. They come among the hives in the early morning, before sunrise, and seem to be scratching and picking up bugs, worms, etc., and will run up to a hive and pick off the first bees that crawl out. I don't think they eat a great many bees. I dislike to kill them, for I have thought they were our best friends. They are not very numerous, but are very industrious; and, aside from eating bees, I don't think they do any harm, but a great deal of good in picking up bugs, worms, etc., in the garden and grove. J. H. HILL.

Grove City, Fla., Feb. 17.

If the Florida jay-bird is any thing like the king-bird described in the A B C book, you have good grounds for thinking that it consumes bees in the same way. I would keep a careful watch if I were you, and let the result decide whether the jay-bird should live or die; and I would not be in a great hurry to condemn him either. I think it is true, that we often make mistakes and kill our friends, mistaking them for enemies—that is, in dealing with the feathered tribes.

IGNOTUM TOMATOES, HONEY VINEGAR, ETC.

Last year my brother, as a subscriber of GLEANINGS, received a package of Ignotum tomato seed, from which I succeeded in raising nine plants. We all think them the finest tomato we ever had. Some of them weighed 18 ounces, and many of them weighed one pound. I also raised some radishes that weighed 4 pounds; were solid all through. They were of the Giant Stuttgart variety. I see Mrs. S. S. Kratz objects to the taste of honey vinegar when she puts it on pickles, etc. I used to dislike honey vinegar. I now think I used it too soon. I think it needs to be, as we say about honey, "ripe." But that is not the word to use in regard to vinegar. It needs to be thoroughly fermented, or worked. I have had some experience in making and using honey vinegar, and I have kept pickles, piccalilli, etc., a year. Many of our neighbors come to us to get their vinegar. Some even send from town (4 miles) to get it. I make it from rinsings of cans, cappings soaked, and any refuse honey we have. I strain through cheese-cloth into a barrel, add some soft yeast, and in less than a year we have vinegar that is pronounced by competent judges to be superior to cider vinegar. I never let any comb get into it. Might that not be what gives it the unpleasant flavor?

Black Lick, Pa., Mar. 7. MRS. BELL L. DUNCAN.

I do not think, my friend, that particles of comb would have any effect on the vinegar whatever.

ALFALFA; CHEWING THE HEADS, ETC.

I desire to add my testimony to what has already been said in regard to alfalfa as a honey-producing clover. We have thousands of acres in this little valley, and it grows on the poorest, rockiest soil we have; in fact, I have not seen a place in this valley, where there is sufficient moisture, that it will not

grow, except in a strong alkali bed; and, as has already been said, it blooms profusely; and so sweet are the blossoms, that, in chewing a head, you seem to get two or three drops of honey; but I am of the opinion that the bees can not reach all the honey the blossoms contain. You may guess that it is very sweet, for our bees work on the dry hay in the spring by the thousands. I am not an expert in honey, but I should say that this honey is of the first quality, both in looks and in flavor. I raised 3000 lbs. in 1-lb. sections, of this honey, from 34 colonies, spring count. Many of the farmers in this locality are getting a few bees for their own use. But two or three are producing honey and bees for the market. The L. frame takes the lead here.

Ashley, Utah, Feb. 27.

GEO. FREESTONE.

A REMEDY THAT DOES NOT COME OUT OF A BOTTLE, FOR BEE-STINGS.

I notice in GLEANINGS, page 60, that J. F. Crawford uses heat for bee-stings, getting relief. For years I have used the nozzle of a smoker to remove bee-stings, performing a scratching motion, or, rather, a push, to remove the sting, which does not bother me by swelling or itching very much, if removed at once. At times in extracting I could not do so immediately, and the pain would be greater. I used a smoke to destroy the scent. I learned that the heat from a hot smoker destroys the scent, and also relieves the pain very much.

Green Hill, Ind., Feb. 22.

J. A. JOHNSTON.

BEE STINGS AND RHEUMATISM.

I was speaking to a lady friend, who is a practicing homeopathic physician, in regard to the bee-sting remedy for rheumatism. From her I learned that a remedy prepared from bees is used in a form of that disease. As I understand the matter, rheumatism characterized by swelling and redness as two prominent symptoms is likely to be relieved or cured by bee-stings; while in other forms of the disease that remedy would be useless. This may, perhaps, account for the conflicting testimonials sent you as to its efficacy.

EMILY E. WEST.

Flint, Mich., Feb. 17.

BEST WAY TO REDUCE INCREASE; HOW TO UNITE.

I have 16 hives of bees, which is just double what I want to have, and I have been considering in what way to double them up. My latest idea is to place the contents (10 L. frames) of our hive in a second story, and shall place it over the same number of frames in another hive; cover up, and let them take their chances as to amalgamating or fraternizing, and the strongest queen her chance of life, thinking the bees in the second story will go down below, and those below will come up, empty the second-story frames of honey, take it below, and make a common supply for all. Is that way as good or not, as to take the ten frames in the lower story of one hive and shake off all the bees in front of another hive, letting them go in in front, as in hiving new swarms?

W. J. CONKLING.

Springfield, Ill., Feb. 17.

The plan you mention is all right, friend C.—that is, providing you do not care which queen is saved. Wait until the weather is so cool that the bees will not fly much, then set the contents of one hive very quietly on the upper story of the other hive. It is a very rare thing to have them kill each other unless you stir them up into a fighting

mood. If the bees should fly the next day, however, a great part of this hive would be likely to go back to their old locality, and it is a pretty hard matter to prevent more or less loss in this way unless you can manage to move one hive, say a mile or more. If the two hives are very close to each other, say five or ten feet, just carry the empty hive away after uniting, and the returning bees will either find a proper hive or divide themselves around in the neighboring hives.

4000 LBS. FROM 60 COLONIES.

I commenced in 1889 with 60 colonies, run mostly for extracted honey. I took over 4000 lbs., and increased to 97. I had but 25 empty hives for my increase, and concluded, when they were filled, to keep them from swarming. But I soon found that the bees had something to say about it. I did all I could, but they swarmed all the same, and I had no hives for them. I put two large swarms into a salt-barrel, two into tubs, four into large box hives, four into log gums, and eight into shoe-boxes. These I concluded to kill and extract, and make wax out of the combs; but when the time came to kill them, my heart failed me, and I put them all into the cave. That salt-barrel is full; one of the tubs is full; and all of the boxes. I shall have a nice time transferring in the spring. I have sold all my honey—extracted 8½, and comb 12½. It has brought me something over \$300. This will make over \$5.00 per colony, besides the increase. If we count the increase it will make 150 per cent on the capital invested.

WM. MALONE.

Newbern, Ia., Feb. 8.

ALFALFA; 15 LBS. TO THE GALLON.

I have only 14 colonies of bees, but I have built them up from one colony. I have had bees since 1886. Some of our best bee-keepers thought at that time that alfalfa did not secrete nectar in this climate. Our wild flowers here produce little or no honey. One year in particular my bees got very short of honey in June; but as soon as the alfalfa commenced to bloom I could see that the bees were putting in honey. Then the alfalfa was cut, and immediately the bees were almost down to starvation again until it blossomed again in July. Then part of the field was left to go to seed; and they not only put in a bountiful supply for winter, but gave me a surplus of about 60 lbs. to the hive. This year 13 hives gave me a surplus of 108 gallons which weighed 15 lbs. to the gallon. The honey is very thick, white, and of excellent flavor. It granulates very easily, even in the hives, if extracting is delayed. My bees will fly over a field of freshly blossomed alfalfa to get to some that is going to seed, and I sometimes think it has little nectar in it when it first blossoms. We have a field of 60 acres on our ranch, and all our neighbors raise alfalfa also.

Fort Collins, Col., Mar. 5. MRS. J. ARMSTRONG.

Are you not mistaken, my good friend? The thickest honey I ever heard of weighed 12 lbs. to the gallon, and then it would hardly run. To weigh 15 lbs. to the gallon it would be so thick, even in warm weather, that you would almost have to cut it with a knife. Either your scales were wrong, or else the honey was of greater specific gravity than any thing we have ever heard of before.

OUR QUESTION-BOX,

With Replies from our best Authorities on Bees.

All queries sent in for this department should be briefly stated, and free from any possible ambiguity. The question or questions should be written upon a separate slip of paper, and marked, "For Our Question-Box."

QUESTION 157.—a. Have you practiced caging queens during the honey-flow, to prevent swarming? b. In your opinion, did it answer the purpose? c. Do you think that the colony so experimented upon produced more honey? d. If the caging of a queen is not entirely satisfactory, do you feel warranted in testing it on a larger scale next year?

No.

Illinois.

MRS. L. HARRISON.

No.

Cuba.

O. O. POPPLETON.

a, b, c. No.

Illinois. N. W.

DADANT & SON.

I have never tried the plan.

Illinois. N. C.

J. A. GREEN.

I have often done it. Removed the queen. It is a good policy.

Michigan. C.

A. J. COOK.

a. Yes. b. No. c. No. d. I have tried it two or three times with unsatisfactory results, hence I will not give it any more trials.

Louisiana. E. C.

P. L. VIALON.

Yes, years ago; but I am not sure but more honey can be obtained by letting one swarm issue from each old colony.

New York. C.

G. M. DOOLITTLE.

a. No. b. Certainly. c. Yes (?). d. My way of caging was perfectly satisfactory, so I shall pursue the same course next year.

Ohio. N. W.

A. B. MASON.

a. Yes. b. Yes. c. Yes. d. We shall cage queens in the future to prevent swarming, and also to secure a larger surplus of honey.

Wisconsin. S. W.

E. FRANCE.

No, but I know some one who has. b. No. c. No. d. Caging the queen does not cure the swarming fever. Taking them out, does.

New York. C. P. H. ELWOOD.

Yes, I have caged queens to increase the production of honey, but I am satisfied that the reverse is the result. It does not prevent swarming.

Ohio. S. W.

C. F. MUTH.

a. Yes, sir. b. No, sir. c. No, sir. d. With my present light and experience I do not wish to experiment further. I think there is a method ahead that will accomplish all we desire, with but little manipulation.

New York. E.

RAMBLER.

a. Yes, caged them permanently by pinching off their heads, only when swarms issue. b. It did. c. I do. I shall practice this kind of caging to prevent swarming during the honey-flow and to secure young queens at the close of the season.

Ohio. N. W.

H. R. BOARDMAN.

a, b. Yes. c. No. d. Yes, if necessity requires it. Unquestionably, the colony that will produce the most surplus honey will be such as are so managed as to prevent all desire to swarm, and at the same

time have a prolific queen to keep the brood-nest well filled with brood.

Connecticut. S. W.

L. C. ROOT.

This is one of the interesting plans which I have never tried. I feel a little suspicious that it might not work with me. My bees might build a good many queen-cells, and then devote themselves so assiduously to the cells as to forget about the honey business.

Ohio. N. W.

E. E. HASTY.

a. No, but nearly the same thing. I have removed them entirely from the hives. I have experimented in this way for a number of years, but am not satisfied as yet that it would be practical every year and in all localities. b. Yes, it prevented swarming. c. No. d. Yes, I shall continue to experiment on this line until victorious.

Vermont. N. W.

A. E. MANUM.

a. Yes. b. Largely. c. No. d. Not unless I have to. Bees swarmed excessively last season; and being short of hives we resorted to caging queens, caging 100 or more. It may be best to do so if we can not control swarming any other way; but if we can control it otherwise, I prefer that the queen be left to perform her regular duties in the hive.

Wisconsin. S. W.

S. I. FREEBORN.

a. Yes, hundreds of them. b. Yes. c. No and yes. If the colony had kept their queen laying right along without swarming they might have made more honey; but if they swarmed, less. d. If I can't do any better I'll keep on caging. I like that better than swarming, but I hope some time to find a way to have the queen laying and yet not have the bees desire to swarm.

Illinois. N.

C. C. MILLER.

a. No, sir; that is one of the things I should not have to practice in order to decide against. I feel sure that I know enough of the instincts and habits of bees to know, without practice, that whoever adopts that method will surely discard it again. Space forbids going into details in regard to the reasons. You try it with not less than twenty colonies until you are thoroughly satisfied one way or the other, and then report; and if you do not say that I am right I will present you a queen that will produce bees as good as any you ever saw, I trust.

Michigan. S. W.

JAMES HEDDON.

The above replies are about what I expected. I have always been opposed, as you may know, to keeping queens idle. In fact, I do not believe in shutting up any kind of animated nature, and keeping them from doing something useful. In our apiaries we never have a surplus of bees, because we sell them by the pound; therefore we should never want a queen shut up when she might be laying. Some excellent honey-producers, however, who do not want increase of stocks or increase of bees at certain periods have thought they saved honey by preventing the production of useless swarms. Sometimes I have thought this might be possible. When visiting Dr. Miller I found hives containing caged queens, and watched the whole matter with great interest. I presume he had more than a hundred caged when I was there, and he was for the time quite favorable toward it; but he says since that he does not like it.

However, he decides to keep on caging if he can not do any better.

SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

That art on which a thousand millions of men are dependent for their sustenance, and two hundred millions of men expend their daily toil, must be the most important of all—the parent and precursor of all other arts. In every country, then, and at every period, the investigation of the principles on which the rational practice of this art is founded ought to have commanded the principal attention of the greatest minds.

JAMES F. W. JOHNSTON.

RAISING CROPS UNDER GLASS.

The experience of the past winter has convinced me more than ever before, that I, at least, must have some arrangement whereby the glass can be over our crops when it is needed, and at no other time. During the great abundance of rain that we have had for months past, and with the rain, as a matter of course, a temperature more or less above freezing, I would have the glass off the greater part of the time, especially with such hardy plants as beets, lettuce, cabbage, celery, corn salad, onions, etc. I want the direct rain, I want the direct sunshine, and I want the free air of heaven, whenever it can be had without running the temperature too low. By this means we get rid of the green fly and all other insects; we get rid of mold, fungus, and every thing of the sort; and we have absolutely nothing to do with the plants at all, except to interpose the glass when the temperature gets too low. The great problem is, how to accomplish it with the least expense. I should at once decide on having my plant-beds on wheels, and push the beds all outside by appropriate machinery, were it not for the extra amount of ground needed. To avoid this extra space, I see no other way than to have the sashes hinged so they can be turned up nearly to a perpendicular, to let in the sun and rain. None of the plants I have mentioned are injured at a temperature of 40, or, say, down to 35, although the amount of growth is very small unless the temperature is above 50; but 60 is better, and 70 still better, where we want them to grow rapidly. Tomato-plants, however, and other forms of tropical vegetation, would want to go 10 or 20 degrees higher. This season, just as the green fly began to threaten to make us trouble, and just as we began to think of buying more tobacco to fumigate, all at once the little chaps began to turn red, and die; and in a few days pretty much every insect had died off from the effects of this fungus, or parasite, or whatever it may be termed. They stick right on the lettuce leaves, and leave a little spot where they died in their tracks. But this mostly washed off, and now our lettuce is growing unhindered.

Carrying dirt, manure, compost, etc., into greenhouses, where the paths are made narrow for the sake of economy, has been a problem to us. When one of our large glasses gets broken, I have sometimes suggested to the boys, that, before we mend it, we might shovel in a lot of dirt where it is needed. Where a ventilator is over a bed, raising the ventilator affords a ready means of

getting in soil. Below is a communication from a brother of W. J. Green, of our Ohio Experiment Station:

A GREENHOUSE HOD.

When the greenhouse was built here at the station, no arrangements were made for carrying or wheeling in the dirt except at the door, and perhaps none were needed, for each opening only makes another place to let in cold air. When we first filled the house last fall, for filling the benches a common bushel basket, carried on the shoulder, was used to carry all the dirt, the walks being such that a wheelbarrow could not be conveniently used; but after wearing out the baskets, making our shoulders sore, and not improving our tempers, the idea came to us that a hod, on the plan of a brick-mason's, would be a good thing, and so we went to work and made two that would hold about three pecks of dirt; and now, after having used them to carry in several loads of dirt, I can say that one man can do with these hods just about the same as two men did with the baskets. The ease with which the hods can be put on the shoulder, and be carried, is surprising to any one who has been using a basket. You might just as well ask a hod-carrier to carry his bricks up in a basket as to ask us to carry our dirt in with a basket now. I have been trying to invent a box-hod, so that, when potatoes and such truck are carried a distance, a box might be set on a hod, and be carried; but I have not succeeded yet, and I will leave it to some genius to find out how far the hod principle is practicable. But I believe, as in our case of filling the benches of the greenhouse with dirt, it may be used in other ways, for things must be carried on men's backs, and there is no getting around it; so to find the way to do it, the least expenditure of strength is wise. Our hods are 5 inches at the bottom, 13 at the top, 12 deep, and 2 feet long, with a good-sized stick in the bottom. This we have found to be a good size, but may not be the best.

E. C. GREEN.

Columbus, O., Mar. 8.

Well done, friend G. I have been studying on this same matter of an easy method of moving things; and I do believe that, under many circumstances, a light, properly made hod would be an excellent thing for the market-gardener. The potato-boxes are largely used for the same purpose, by placing them on the shoulder; but it is very hard work indeed for me to carry a potato-box full of potatoes; whereas I could get under a hod and carry the same weight with comparative ease. I know, for I have tried it. When some of our boys complained that hod-carrying was very hard work, I have carried a few hods of brick up the ladder, just to see how it went to put myself in their place.

Notwithstanding the exceedingly favorable weather for the growth of all kinds of garden stuff, we find ourselves, this 28th day of March, short of almost every thing in the way of vegetables and plants. Notwithstanding we have a larger area under glass than ever before, the demand is greater than the supply. Our hot-bed sashes made of strips of glass answer excellently, and at the present time we find only one difficulty. When the Brahma chickens happen to walk over the glass, the strips break; the same with a dog, and I think likely a

large heavy cat would break through. This can be obviated, however, by having the strips shorter, and may be a little wider. In other respects they are a success. Beautiful lettuce, cabbages, cauliflower, beets, and other plants, are growing under sashes that have never been moved, and the temperature has been at different times down to five above zero.

PEA BUGS, OR WEEVILS, INFESTING OUR
WHITE BEANS; HOW SHALL WE GET
RID OF THEM?

I do not remember just how many years ago it was, perhaps not more than three or four, when some of the boys and girls told me that our beans were "buggy." Of course, everybody knows about *peas*; but *buggy beans* were something new at the time. Well, of late our beans have been getting buggier and buggier, until during the present season we have several bushels that it would have been better to have boiled up and given to the chickens in the outset. When we first began to find a few of them buggy they were carefully hand-picked, and the buggy ones were boiled for the chickens. Pretty soon the same lot were buggy again, and now they have been picked over three times; but we have little assurance that they will not continue to get buggy as long as they last. One of the women remarked, when picking them over, that some one said at a meeting of the Summit County Horticultural Society, that all beans planted after a certain date, she thought it was some time in June, would be in no danger of bugs; and then I remembered that we had, during the past season, planted a lot of white beans so late that a good many told me they would not ripen so as to become dry. They did, however (the greater part of them), and we had several bushels that were not *buggy a bit*. There has never been a bug among them. This is one point that I wish friends Cook and Green, of their separate agricultural colleges to enlighten us on. Another thing, can the live bugs, or weevil, do any harm to *dry* beans or peas? I suppose they can not, of course; but some of our friends in the seed-room are inclined to insist they can. I confess that I do not like to see the bugs flying around the room, neither do I like to see a lot of them in our bags; but so far as I am acquainted with their natural history, I should say they can do no harm unless they are allowed to fly when the beans are in blossom. Very likely, should we plant buggy peas or beans, the crop would be buggy. Now, friend Cook, you know every thing about bugs—just tell us a little about this bean-weevil, so that we may know how to fight him effectively. Ever since they pestered us we have been putting a little pyrethrum powder in the bags, and shaking them up. This kills the bugs—that is, all that are hatched out. Some of you may ask, "Why, Mr. Root, are you sending us buggy beans and peas to plant?" No, my friend, we are not. Our seed peas are raised in localities where they do not have bugs; and our beans will hereafter be raised so late in the season that the bugs will not trouble them—that is, if planting late will fix the matter.

TRANSPLANTING-TUBES.

LAST summer I had occasion to transplant some small evergreen-trees, raised from the seed in a box. I made a transplanting-tube similar to those you have described in GLEANINGS, and tried water, as you recommend, to let the tube slip. It did not suit me, perhaps because the soil here is different from yours. At least, I thought that, for occasional use, with only one tube, it took too long time, and, in removing the tube, the soil—being loose and sandy—crumbled away from the roots of the plant.

I then made another tube, which would fit easily inside the transplanting-tube. This inside tube has a flange, one-fourth inch wide, at each end, the flanges turning in toward the center. The outside tube (regular transplanting-tube) may have a wire in the upper rim to stiffen it; or a narrow flange turning outward will answer the same purpose, and will, besides, serve as a handhold by which to lift the tube. Instead of either wire or flange, I simply put on a couple of ears near the upper end of the tube, and opposite each other. To use the tubes, I take up the plant, as usual, with the transplanting-tube (having the ears); set it in the hole previously made to receive the plant; replace the soil and pack it firmly around the tube. I now push the inside tube over the plant and down into the transplanting-tube until the lower flange rests on the surface of the soil surrounding the plant. Bearing down on the inside tube, I at the same time, with a finger in each ear of the transplanting-tube, lift the latter up. A few pats with the hand firm the surface of the soil, and the job is done. I set the plant a little lower than the surrounding surface, so that a cavity the size of a wash-basin is left round the plant, into which cavity water is poured immediately, and later when required. I keep the tubes in the pail of water, which I carry with me, to keep them clear of sand and grit. I used the same tubes with great satisfaction for transplanting tomato-plants.

Where a number of transplanting-tubes of the same size are used, one inside tube will, of course, be sufficient for each operator. The idea is not new. I heard about it years ago in Los Angeles, where the implement was recommended for transplanting young fruit-trees from nursery-rows. I never saw the tubes there, but they were described to me as being made of sheet-iron, the size of a stovepipe or larger, and strong enough for a man to put his foot on the flange of the transplanting-tube, and, by his own weight, push it into the ground. I understood there was a patent on the apparatus; but if so it has probably expired before this time.

In very mellow, firm soil, not liable to crumble or cave, a third tube, a trifle larger than the transplanting-tube, might be used for making the hole to receive the plant. This would be desirable where plants stand close together, and where a dead plant has to be replaced by a live one, in order not to disturb the soil more than necessary.

I made my tubes out of cans which I had on hand, and which happened to fit each other. The can for the inside tube had a hole cut in the top and bottom with a circular can-opener, leaving the flanges one-fourth inch wide. The larger can, which was made with a loose cover, simply had the bottom melted off and the ears put on. This is 3 inches in diameter and 6 inches deep; but the size may be varied to suit circumstances and convenience.

WM. MUTH-RASMUSSEN.

Independence, Cal., Feb. 15.

MYSELF AND MY NEIGHBORS.

Unto every one that hath shall be given, and he shall have abundance; but from him that hath not shall be taken away even that which he hath.—*MATT. 25: 25.*

Friend Root:—In my lesson for the family worship a few nights ago, I read the following: "To him that hath, more shall be given, but to him that hath not, it shall be taken away what little he hath." Is it really so, that God takes away every thing we have, just to make object-lessons of us, so as to fulfill the above words of our Savior? About a year ago we met with some heavy losses in business; and as one venture after another has failed, and one thing after another has had to be sold to pay some debt and keep the wolf from the door, it seems as if truly in our case the above words are being fulfilled. I could bear it myself; but when the good wife gets discouraged, and wishes she had married some one better able to support her, it is a little hard to bear. I am willing to work hard, early and late, to again get a foothold; but how can we keep up the courage of those that are near and dear to us? Thinking that perhaps you would have a good word for me (as you seem to for every one) is why I write.

Dear friend, I am very much obliged to you indeed for the compliment you pay me in thinking that I may have a good word for you. May God give me grace and wisdom to answer you wisely. The text that you quote follows immediately after the one that has been through life one of my bright and shining texts. I suppose that our readers are well aware that it follows the parable of the talents, given in the 25th chapter of Matthew. The same thing is also substantially given in the 19th of Luke, although the details are a little different in the two accounts. The main thought and lesson to be gathered, as I understand it, is faithfulness in service, or, in other words, making a good use of that which is intrusted to our care. The text that has given me so much comfort is in Matthew: "Thou hast been faithful over a few things, I will make thee ruler over many things." In your lesson for family worship, you of course read the whole parable of the talents; and in view of that, dear friend, I can hardly understand how you could interpret it as you do; namely, that the Lord had taken away these things from you just to make an "object-lesson." I am afraid your faith is waning, dear brother. God never takes away anything from us simply that the Scriptures may be fulfilled. Far from it! On the contrary, we are told that God will withhold no good thing from those who love him.

A few weeks ago at a farmers' institute, friend Terry, in one of his talks about poor, slipshod, heedless farming, made a remark that such cases verified the Scripture text, "Unto every one that hath shall be given;" "but unto every one that hath not, shall be taken away that which he hath." Some one in the audience called out: "Mr. Terry, do you believe in that kind of doctrine?"

His reply was, substantially:

"Yes, my friends, I do; that is, if you put it in this sense: The man who lets his

manure heap lie out in the rain so that the drainings may go off into the highway will surely lose what little he has. You may say God will take it away from him, or, if you choose, you may say that in the ordinary course of events, or in the nature of things, his poor run-down farm, that is hardly worth taking as a gift, will go into other hands. On the other hand, he who takes proper care of his manure, and saves every particle, both liquid and solid, and handles it with economy, and judiciously applies it to the very places where it will do the most good, shall be prospered. God will give him abundance, to be added to what he already has. Or, to put it as before, in the course of events, or nature of things, he will *continue* to accumulate property to make his farm more valuable, and comfort and peace will be around him."

If friend Terry is not satisfied with my version of his remarks, I hope he will state the matter himself.

And now, dear brother, instead of its being true that God takes away the things you mention, is it not just the reverse? You may think that I am hard and unkind; but, dear friend, you have come to me, and I can not shirk responsibility. The physician or the surgeon who cures, oftentimes gives pain; and I feel constrained to speak plainly, because others have written to me much as you have done, and thousands in our land are now complaining of their hard lot. Foremost among them are the farmers whom friend Terry has been urging to better ways and to better work. Is it God who afflicts, and why does he afflict?

You say you have met with some heavy losses in business; and a little further on you say, "One venture after another has failed." Now, dear brother, perhaps you did not mean to use that word "venture." I gather that you are a Christian—one who reads the Scriptures, and asks God to help day by day. If so, is it not possible that you have been depending on "ventures" rather than on the hard faithful work that you speak of further along? I do not believe that Christian people have a right to make ventures. I say this, using the word in the sense of speculation. A great many of the so-called ventures are made by going in debt; and oftentimes if we listen to old experienced business men they would say emphatically, "*Let it alone.* Don't go into any such speculation." I know a good many young business men are in the habit of doing their own thinking, and not consulting the veterans around them. I am sure, however, that it is wrong. A great many heartaches would be saved if our young business men would consult older heads before making ventures. In your respective churches you have old and successful business men. I never knew of a church that did not contain more or less such. Go and consult them. A great many times the pastors are in position to give wholesome counsel. The deacons of the church are almost always capable of advising wisely. Of course, it is not absolutely necessary that you go to a member of the church; but as a rule I have found professing Christians con-

scientious. Now, my dear brethren, you need not smile with superior wisdom, for you will have to admit that I have had more business deal with all classes of people, scattered all over the world, than most of you; yes, perhaps more experience in trusting professing Christians and non-professors than most business men in the world. With this experience before me, I advise you to go to some church-member in good standing. I can not think of a business man in all my acquaintance who would not pleasantly and good naturedly advise a young man. While I write I have in mind a number of young men who started out in the world fairly, but who have become soured and cross—perhaps have lost faith in humanity and faith in God, because their “ventures,” as our friend terms them, have, one after another, turned out very much as described in that brief little letter above.

I find I have unconsciously been talking to the writer as if he were a *young* man. May be it is a mistake; but I judge he is. If so, there is hope for him yet. Yes, there is hope for him any way, even though he be 80 or 90 years old, if he hold fast to the Scripture and take it as it reads, and not blame it for what he alone is to blame for. Of course, I know nothing about the circumstances. I can not remember that I have ever heard of or from the writer until to-day; but I feel safe in assuming that the reason why one “venture after another has failed, and one thing after another has had to be sold,” is because he is guilty in something the same way that the farmer was, whom friend Terry was speaking of—guilty in letting the manure and other things go to waste. Many a young man is diligent and industrious, and saves his money until he begins to think he is old enough to go into business. Then he begins making “ventures.” If one venture turns out bad, another one is pretty sure to present itself that looks all right. He makes haste to get out of the first one—may be sells unwisely at a sacrifice, so as to embark in the second. Then a third follows suit, and finally he begins to blame his friends; may be censures his good wife, and finally complains of the words of Holy Scripture, that would lead him from darkness into light, if he would take it as it reads. “Thou hast been faithful over a few things, I will make thee ruler over many things.” Just hold fast to that promise, dear friends, in trouble, and I assure you that the light of prosperity, and the light of God’s love, will soon beam down upon you. Don’t aspire to great thing—that is, for the time being. Don’t strive to do as others do. Live according to your means, and be diligent and faithful in the humdrum duties of every-day life. Do not get weary in well doing.

At the present time there seems to be a great mania for speculation. Farmers become uneasy and dissatisfied, and Satan pretty soon finds some mischief for dissatisfied ones. Will our farming friends please remember that it is not the *farmers* alone who are having a hard time? In the letters that come to me daily I hear as much com-

plaint of hard times, and of the difficulty of making an honest living, from those in towns and cities, and in the different avenues of trade, as from among farmers. Grocers say that profits are cut down so small that no one can live. Some of them complain of foreign competition, and want the products of their brothers across the ocean taxed, or a tariff put on the product of their industries. There are others who complain that the newspaper writers, or those who are employed by the state or government, are the only ones who have an easy time. Please do not, dear friends, listen to Satan’s suggestions in this line of work. Could you see the piles of rejected manuscripts that lumber our desks daily, you would not think that writing for the press is an easy way of making a living. It is a very good and safe way, I admit, *after* you have mastered the business, and have learned by hard experience and long study to be able to furnish something that commands good pay at sight. We must be faithful over a *few* things, before we can become ruler over many things.

Just now there are more people coming here begging for something to do than perhaps at any one time before. The warm winter and the bad state of the roads have been a clog to business, and this accounts, perhaps, somewhat for the condition of affairs. But as I turn them away, one after another, almost hourly, it really pains my heart to know that we are even now in *need* of *competent* help. How do I know, you may ask, but this very help that is offered might not be just what I need? I know by repeated trials and experience. Once in a while we get a jewel; but as a rule, we get ninety-nine men who are not jewels before we get the hundredth. I do not wish to censure or blame these people, for they may have had experience in some kinds of work, but not in a line where *we* want them, and in most cases nothing but the drill of our own business makes them competent. We have quite a few now in our establishment who get a thousand dollars or more a year; but they acquired their skill by *years* of service. A great many who come to work for us complain if they can not have the highest wages after a few *months’* experience; and when I try to explain the matter pleasantly to them they become offended, and say hard things of me. I quote to them over and over again my favorite text, “He that is faithful over a few things shall be made ruler over many things.” But they reject it, and try to find a place somewhere else. Perhaps they go in business by themselves, and then learn by sad experience that the things which I demanded, the world at large *also* demands, and that “there is no excellence without great labor.” In the same parable from which I have been quoting, there is mention of a poor fellow who received only one talent. His lord very likely knew at the outset that *one* would be all that it would be wise to intrust him with. In the end it turned out that he was not worthy of having charge of even one talent. He did absolutely nothing with it. Very likely he proposed doing

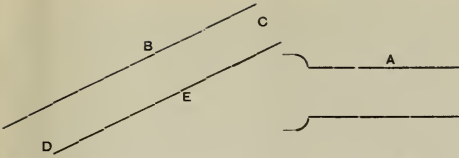
something to-morrow or "next week," and it was put off and allowed to lie just like the manure heap that friend Terry told us of, until, in the course of events, reckoning time came and he was asked to report. Of course, he felt cross, as slothful and lazy people always do. He finally got up a poor feeble excuse for his wrong doing, and commenced to put the blame on his lord. He says, "I knew thee that thou art a hard man," or, in other words, "I knew at the outset that you would beat me in some way or other, and that there was no use in expecting any thing like fair treatment, and so I just laid it away." It is the old, old story that we have had since the time of Adam. When God called him to account for his transgression he commenced first by blaming the woman and then the God who gave him being, while he *himself* was the guilty one. Who can tell what might have been the result to the whole human race had Adam been *manly* when first called to account?

Now, then, dear friend, I have got almost through finding fault, and censuring one whom I really know nothing about. I wish, however, to take you to task once more for the expression you let drop in regard to your good wife. You say she "gets discouraged, and wishes she had married some one better able to support her." Now, my dear brother, I am sure that a wrong spirit was in your heart when you penned those words. I have never known a woman who was not willing to bear and suffer for her husband's sake, even until forbearance seemed to every one to have ceased to be a virtue. I gather from the sentence that you have let drop, that you and your wife have had something approaching unkind and unpleasant words. I fear that Satan has been tempting you to censure each other. Please do not let such a thought get into your heart again. I think very likely your good wife is right and you are wrong. In fact, I almost feel certain she has objected to your "ventures" as you term them; and I am quite inclined to think that, had you listened to her, and followed her advice, all would have been well. Did you not exaggerate when you guessed that she had *even once* harbored the faintest wish that she had married some one else? If you want my advice, it is this: Go to her and ask her forgiveness; then, hand in hand, you two should kneel and ask God to forgive you both. Having done this, get up and grapple manfully with the duties of life. Work hard, early and late, as you suggest. But, O my friend! do not indulge in ventures or speculations. Do faithfully and well what your hand finds to do. If you have not work of your own that pays, go and work for some one else. Work that is done with the fear of God in the heart, can not fail to be appreciated. The little text you have quoted to me as a stumbling-block may yet be your bright and leading star. Read that parable over again, from beginning to end. Take the words of our Savior as he meant them, and let them be your help and prop in times of trial and adversity. Do not find fault with your wife; do not find fault with

your "neighbors;" do not find fault with the great outside world; do not find fault with the laws of our land; and especially, dear brother, do not find fault with the Holy Scriptures, the inspired word of God; and above all, do not let Satan persuade you for a single instant that Jesus, who came into the world to *save* sinners, ever thought of taking away the things you hold dear, simply for an object-lesson. "All things shall work together for good to those that love God."

At the risk of saying something that may sound like finding fault with the good people whom I meet day by day, I want to give you a simple illustration of the reasons *why* people have trouble; yes, I want to illustrate exactly why the state of affairs described in our text comes about. Some months ago two good strong men came to me seeking employment. One of them had had trouble with his former employer, and I soon discovered why. The other one took hold so willingly and with such energy that I was a little puzzled to know why he should be out of a job at all. But ere many days passed I thought I knew why. In order to get our insurance down to a low rate, we have, by the advice of a company who make it their business to insure factories, been putting in some extensive improvements in the way of waterworks. After being fully equipped with the sprinklers described in another column, we were also desired to provide a stationary fire-engine, or steam-pump, communicating with four large fire-hydrants. These hydrants are situated far enough from the buildings so that they can be worked safely, even with the building on fire. They are to protect also the lumberyard, the depot buildings, and any other outside influence that might communicate fire to our factories. To furnish water for these hydrants we were obliged to lay six-inch cast-iron pipes from the steam-pump to their vicinity. At one place these heavy iron pipes were to go down something like six feet under ground; but by some mistake the trench was not dug on just the right line. The men who laid the pipes declared the trench must be filled up and a new one dug. As the ground was frozen, however, this would have been a laborious piece of work. I suggested that we cut out under the bank, so as to get the pipe in place without making a new trench. The objection was made, that the bank would cave down. I replied that it would not so long as the ground remained frozen.

The two men were set at work at it, and by 11 o'clock they had it in nice shape for laying the pipe. As I examined the work I told them to be sure to get the pipe in place before they went to dinner, because, if the sun should come out it might thaw the bank so as to let it break down. They replied that they would be sure to do so. When I finished my nap before dinner, my first move was to see to the pipe-laying, as I noticed there was a break in the clouds, indicating that the sun might come out very soon. Let me ask you to look at the diagram on the next page, so as to understand the situation of affairs.



WHY SO MANY PEOPLE ARE OUT OF WORK.

Pipe A was in place, and covered with dirt. Pipe B was the one that came under the bank; and as I came in sight the men were carrying it to its place. One had hold of the pipe at D; the other had hold of C. Fearing they would step on the bank where it would not bear much weight, I ran for a rope and was just in time to put it around C, giving one of the men the ends to hold. I stayed by him until I saw it lowered until it struck the end of A. Then I went away to attend to others who might need my direction, and forgot about the pipe. As soon as I finished my dinner I went out to see if the pipe was all right. One of the men was on hand, and informed me that the bank had caved in. "Well," I replied, "it does not matter much, if it did. We got the pipe in place just in time, didn't we?"

He pulled off his hat, scratched his head, and answered a little slowly, "Why, Mr. Root, we did not get it quite in place."

"You didn't get it in place!" said I. "Why, I stayed with you until I heard the end of the pipe strike the bell where it was to go in."

"Yes, I know you did," said he; "but before we got it quite in place the whistle blew for noon, and we had to stop."

I presume very likely my temper came up a little just then.

"Why, Mr. —, one minute more would have been ample time to have drawn the pipe back until the end would go into the bell; and yet because the whistle blew, you two great men went away and left it right there; and this, too, when you could plainly see that the sun was shining right on the frozen bank; and the way it is thawing now must very soon have let it down."

"Yes, I know; but the other man would not stay any longer when the whistle blew, and I could not get the end in place alone, so it had to be left until after dinner."

I went to the other man, and demanded of him why he went away, even if the whistle did blow. He said the first speaker was the one who went away first. I left them disputing as to who it was that first abandoned the job when the whistle blew. Please notice, friends, that the rope was around at the point C. The man on the bank had an end in each hand. All he needed to do was to raise up until his comrade could draw D back two inches, and then push it into the bell. Had I been present, one minute of my time would have saved a hard half-day's work in the mud. Thus it is: there is no lack of muscle; but, O my friends! there is a constant lack of men to *superintend* — men who love their "*neighbors*" more than their "*dinners*." Now, mind you, the ability to superintend must be *acquired*. It is the result of being "*faithful in few things*" for months and years. "He that overcometh,

and keepeth my works unto the end, *to him* will I give power over the nations."

The men both felt quite bad, and suggested that they could take a crowbar and pry the pipe back enough to let it go in place. I showed them, however, that this could not be done, because a great quantity of dirt had fallen under the pipe at E. One reason why I did not want to dig a new trench was because a great heap of ashes lay over the bank that had caved in. This heap of ashes I wanted to spread over our grounds; and now it had gone down with the bank, right over the pipe. I have read somewhere of a man who was carrying a hod full of bricks to the top of a very tall ladder. When the signal for dinner sounded, he dropped the hod full of bricks, and hurried down the ladder because it was "quitting time." The latter, of course, was an exaggeration; but there is a grand moral in it nevertheless. Some people, when they work, study the interests of their employer, whether it is quitting time or not. There are others who seem to have very little care or regard for anything beyond receiving pay every Saturday night. It pains me to write these words, dear friends; and I am glad to be able to say that the operation of laying the cast-iron pipe, described above, is the worst case of the kind I remember in all my business experience, although we do, however, see it cropping out in little things almost daily. Some of you may suggest that I should have required these men to dig up the pipe and put it in place on their own time. I thought of it, but I am very glad now that I did not do it. It has never been my custom to oblige a full-grown man to make good any loss unless he chooses to do so of his own accord. My daily prayer is, that God may forgive my debts as I forgive my debtors; and had I not forgiven them it would have troubled me afterward. I will say this for them, that they seemed to feel very badly about it; and I tell you, that caved-in bank went out in a hurry. Before they got done with the pipe-laying, their clothes were pretty muddy; and when quitting time came, one day after the ditch was finished I gave each of them half a dollar extra, telling them to give it to their respective good wives, to make up for the trouble they would have in cleaning the mud from their husbands' clothes. I preferred to do this, that they might rest assured I had no grudge laid up against them, even though they did a very foolish thing in leaving the pipe as they did.

Now, then, friends, we are all working for *somebody*. We are all working for the great wide world; we are all working for "our neighbors" in some sense or other. If the prevailing motive is *self*, then shall the concluding words of our text be true: "But from him that hath not, shall be taken away even that which he hath." If, however, your first and foremost and inspiring motive is to work for the interests of the *great world* instead of for *self*, and instead of *self* for *Christ's sake*, then shall the first part of our text be verified: "Unto every one which hath shall be given, and *he shall have abundance*."

GLEANINGS IN BEE CULTURE.

Published Semi-Monthly.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, OHIO.

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, APR. 1, 1890.

Take heed therefore how ye hear; for whosoever hath, to him shall be given; and whosoever hath not, from him shall be taken even that which he seemeth to have.—LUKE 8:18.

THE new and again enlarged edition, the 42d thousand, of the A B C of Bee Culture, will be out in a couple of weeks.

BUSINESS IN THE OFFICE.

WE have not thought to mention it, but there are now five standard Remington type-writers that work constantly in our office, and other things to match. Two of them are in charge of men, and three in the charge of ladies; and I tell you, they make quite a clatter. May be the rest of you don't think of it, but I do; and as I read the mail that come into our office, and that which goes out, I often thank God for our modern improvements.

SELLING GLUCOSE FOR HONEY.

OUR enterprising friend T. H. Kloer, of Terre Haute, Ind., in concert with the editor of the *American Bee Journal*, have hunted up and thoroughly exposed "Albert Botsford Co.," in their work of putting a chunk of broken comb honey in a jar and filling it with glucose, labeling it "pure clover honey." We recommend that the whole matter be placed in the hands of the food commissioners of the State of Illinois, and let them deal with the culprits. When friend Newman called on them they only claimed it was "two-thirds honey," notwithstanding the label. They even had the audacity to try to sell some of it to the editor of the *American Bee Journal*.

BRONZE MEDALS AT THE PARIS EXPOSITION.

IN the Agricultural Department of the Paris Exposition we note that the following were awarded bronze medals for various exhibitions made. We do not discover that any one in said department was awarded a gold medal, although there were several silver and gold medals awarded in other departments of agriculture.

A. J. Cook, Lansing, Michigan.
G. W. Demaree, Christiansburg, Ky.
W. T. Falconer, Jamestown, N. Y.
G. L. Tinker, New Philadelphia, Ohio.
A. C. Tyrrel, Madison, Neb.
James Heddou, Dowagiac, Mich.
C. F. Muth & Son, Cincinnati, Ohio.
Newman & Son, Chicago, Ill.
A. I. Root, Medina, Ohio.
Jas. H. Van Deusen & Sons, Sprout Brook, N. Y.

BROKEN-DOWN COMB HONEY; WHO WAS TO BLAME? THE REMEDY.

WE have just received a consignment of comb honey, consisting of ninety-four 24-lb. cases, only six of which arrived in good condition. The rest were broken down. The honey was transferred once, and this transfer meant hauling by a drayman. The shipper failed to put on caution labels,

giving directions in regard to the handling of honey, both in a dray and in a car. The honey *might* have been broken down just the same with the labels, but the probabilities are that it would have come through safer. We had to unpack all the cases, pick out the pieces of comb, wipe off the drip, set them in wooden butter-dishes, and now they will have to be sold at a sacrifice. The cases had to be washed, and the now empty sections are piled up in front of the boiler arch. Railroad men are careless, but we must not blame them too severely when bee keepers *themselves* are largely responsible for broken comb honey. At our State Convention at Cleveland, Dr. Miller, in giving directions for shipping, emphasized the importance of having a starter fastened to the top and *bottom* of the section before putting it in the hive. This insures the attachment of the comb, not only to the top but to the bottom. In putting in your foundation this spring, please bear this in mind, and save yourselves and consignee trouble and expense. Dr. Miller shipped 12,000 pounds of such honey last fall, and not a section was reported broken. The leading article, by Chas. F. Muth, contains some valuable suggestion on shipping.

THE GRINNELL AUTOMATIC SPRINKLERS.

THE above apparatus for protection from fire is now put up through all of our various buildings. Pipes run along the ceiling overhead in such a way as to communicate with the sprinklers, so they are not more than 10 feet apart all through the premises from attic to cellar. As I write, the windmill up on the hill is very busily at work keeping the great tank replenished with water. Suitable pipes connect this tank with the sprinklers before mentioned. To-day our noon service was shortened five minutes that we might witness the operation of testing the sprinkler system. Mr. Blake, the foreman of the men who put the apparatus up, informed me that five minutes would be ample time to build the fire and let the apparatus extinguish it. In one of our lower rooms which is paved with brick, a fire of shavings was started. When the flames began to roll up against the ceiling to such an extent as to make it begin to look dangerous, a little explosion announced that the sprinkler had opened up. Then came a rush of air for about a minute, when the water promptly followed. The fire was very soon wetted down and extinguished; but the machine kept on throwing water until the spectators scattered in dismay, clambering up on boxes and back into corners. Not only was every portion of the floor wetted, but even the ceiling overhead. As soon as the electric alarms sounded the signal, the water was promptly turned off; but before it wound up, the floor was covered with water, and every thing within a circle of 25 or 30 feet was dripping and soaking wet. As these sprinklers are only ten feet apart, the effect of opening a great number of them would be to literally *drench* not only the floor and contents, but the *ceiling* as well. When the matter was first talked of, I gave, as an objection, that the machinery would become in time old and rusty, so it would not work. But, please bear in mind that the whole apparatus is bright, dry, clean, and new, and it remains so indefinitely until a fire or something else warms the sprinklers up to a temperature of 160 degrees. The electrical alarms that give notice of the fire are three in number. One is in the engineer's room,

the second in the room where the watchman stays, and the third is in our bedroom over at the house. These are for the purpose of giving us notice, not that the fire needs attention, but that the water must be looked after, and turned off when the fire is out. If nobody should be around to turn the water off, I suppose the contents of the great tank on the hill would be gradually sprinkled over the spot where the fire was. Further particulars of this wonderful apparatus may be had of B. W. Dawley, 115 Monroe St., Chicago, Ill., Providence Steam and Gas Pipe Co.

THINGS NOT NECESSARILY USELESS BECAUSE OLD.

ALL sorts of devices are being sent to us as improvements over the common accepted implements. With almost hardly an exception these things are old; and it begins to seem as if it were impossible to invent something new in bee culture. But because a thing is old it does not necessarily signify that it is valueless; but in a great many cases the rule holds true. But things are changing a good deal. What we a few years ago deemed impracticable and unnecessary—"too complicated and too much machinery"—quite possibly may be just the thing we need at the present time; or if not at present, in the near future. For instance: A few years ago a great majority of the bee keepers would not tolerate frames at fixed distances. At that time out-apiaries and moving bees had not begun to assume the importance that they do now; but it begins to look as if bee-keepers at large would generally demand a frame that will be held at certain distances apart, and *stay so* whether the hive is to sit upright or on its side; whether it is to remain quietly on its stand, or be jolted over a rough road.

It is true, that a good many valuable devices have been suggested in the past; but as the times were not ripe for them, they lay dormant until they were. Take, as an illustration, the thick top bar. It was suggested years ago, and now is coming into prominence. While Dr. A. B. Mason was here he told a little story that bears somewhat on the point. In or near Toledo, in the present gas-field, some old fellow, after he had dug his well to pretty nearly the required depth, discovered there was a hissing noise. As it was a little dark in the well he determined to take a light down and investigate. He had no sooner got his candle down near that strange hissing noise than he was "fired" out of the well as from the mouth of a large cannon, and, strangely enough, he landed on the surface of the ground without injury. Neither he nor any one else stopped to reflect that it was natural gas, mixed with common air, in the right proportion to produce an explosion. The times were not ripe yet, and the superstitious people declared that the spirits held possession in the depths of the well. Without further investigation the owner filled the well up, burying one of the greatest treasures that has ever been given to mankind, and concealing for many years to come something that has blessed the world during the last two or three years in the form of natural gas. If superstition had not been rife, and the spirit of scientific investigation had prevailed, folks would have wanted to know what threw that fellow out of the well. The result would have been natural gas years ago, and the poor well-digger and his neighbors might have been immensely wealthy. Dr. Mason tells us that

within the past year this old well has been resurrected, and is now one of the profitable gas-wells, doing good service and blessing community.

Just think how *near* many times we approach the discovery of a valuable idea; and yet, even after the thing is presented to our very eyes, we reject it until the *ripe* time has arrived. Let us not be discouraged, then, friends; even if things are old, may be they are good. The only sad thing about it is that, if we wish to patent the idea, we can not do it, that is all, because some fellow away back in the '60's illustrated and described that very thing, but the world did not see the point. E.

SPRAYING FRUIT-TREES.

As the season will soon be upon us, it may be well to consider this matter of damage to bees by unnecessary and useless spraying of fruit-trees when in blossom. The matter has been brought up so many times, and it has been so fully explained by our experiment stations that there is no collision at all between fruit-growers and honey-producers, it seems as if everybody should understand it. We will go over it again, however. It has been fully decided, by competent authority, that the proper time to spray is *after* the blossoms have fallen. Paris green or London purple must be deposited on the *fruit itself*; and this can not be done while it is covered by the petals of the blossoms. If done at the proper time as above, there can be no possible injury to the bees, nor to the people who eat the honey; in fact, I do not see how there *could* be any injury at all, unless somebody is stubborn, ugly, and wicked. In that case he should be dealt with by law, if nothing else will answer. Some of the periodicals devoted to gardening and fruit-growing have been very shortsighted in this matter; one especially, indulged in some unkind reflections toward Prof. Cook, and intimated that the fruit interests were as of much importance as the honey interests; whereas the publisher of any journal devoted to fruit or vegetables should certainly understand that there is no conflicting of interests at all. A correspondent says that, in a catalogue published by Chas. A. Green, editor of the *Fruit Grower*, occur these words of instruction:

"A spray of very weak Paris green thrown over the foliage at blossoming time."

One of our bee-men, Mr. N. T. Phelps, of Kingsville, Ohio, wrote a remonstrance, to which the editor replies:

"On account of possible injury to bees, do not spray until the blossoms have begun to disappear."

Now, this is good so far as it goes; but it intimates indirectly that there is need, in the interests of a crop of fruit, to spray the blossoms. I think Editor Green wants shaking up a little. It seems to us that the editors of the agricultural papers should not only be thoroughly posted, but they should be vehement in setting people right on a matter that interests both parties—fruit-growers and bee-keepers. It is a serious matter to poison a neighbor's stock, but a thousand times more serious when you heedlessly go at something that may poison not only your neighbor, but the public at large. We need hardly hint that the bees are of benefit to the fruit-growers as well as to the bee-keepers. Please remember, friends, that at the joint convention of the bee-keepers and fruit-growers of the great State of Michigan, the decision was that there were no conflicting interests of any account. This

meeting was announced ahead, and fruit-growers were urged to come forward and present their complaints where they had suffered from bees.

We have at this date 9704 subscribers.

SPECIAL NOTICES.

THE KUMERLE LIMA BEAN ONCE MORE.

Since our last, I have discovered two individuals besides myself, who have raised these beans. They have, however, had the same trouble in getting it to ripen that we had. This may be owing to the peculiarly cold weather last season at the time they were planted. We have succeeded in buying a very few, and can therefore offer them for 5c each, instead of 25c a bean, to those who may care to try it.

SOME MORE LITTLE BOARDS FOR SALE CHEAP.

The lot I spoke of in our editorial, p. 149, Feb. 15, were all sold very quickly; but we have now about 5000 pieces, which our friends may have until they are gone, for a cent apiece. We have generally used them for making chaff-packed division-boards, but we have now too many for that purpose. They are 27 inches long, 3 wide, and $\frac{3}{8}$ thick, planed on one side—all clear pine.

CLOVER SEED—ALSIKE AND WHITE DUTCH.

Now is the time to sow it. We have a nice lot of very choice seed, both varieties. The price will be as follows: White Dutch, 1 lb., 27 cts. by mail. By freight or express with other goods, 18 cts. per lb.; \$2.00 per peck; \$3.90 per $\frac{1}{2}$ bushel; \$7.50 per bushel, bag included.

Present price of alsike, the next in value as a honey-producer, is 25 cts. per lb., postpaid. By express or freight, 15 cts. per lb.; \$1.90 per peck; \$3.60 per $\frac{1}{2}$ bushel; \$7.00 per bushel.

KIND WORDS FROM OUR CUSTOMERS.

WHAT A SINGLE INSERTION OF A SMALL ADVERTISEMENT WILL DO.

Please take out the "ad.," or all the bee-men in the U. S. will write to me. D. T. TRACY.
Longmont, Col.

KIND WORDS FOR OUR GARDEN SEEDS.

We are more than pleased with the garden seed that you send out. There is at least one-third more seed in each package than we have been in the habit of getting for the same money. Please accept thanks for promptness. W. L. COGGSHALL.

West Graton, N. Y., Mar. 24.

KIND WORD IN REGARD TO PROMPTNESS.

My seeds came to-day. I will admit you waste no time in filling orders, yours being the first of three to reach me, although I sent the order to you two days later than the others. J. H. SNIDER.

Salt Lake City, Utah, Mar. 22.

KIND WORDS FOR MARCH'S AMERICAN GROWN CAULIFLOWER SEEDS.

I thank you for promptness in shipping, and will say I have some very nice-looking plants from the seeds. The cauliflower seeds beat any I ever had before. We usually sow much thicker than cabbage, and get half as many plants; but every seed must have germinated. This is quite an item with expensive seeds. W. HICKOX.

Rockport, O., March 15, 1890.

SMITH'S PUMP FOR SPRAYING FRUIT-TREES.

The Smith pump is attracting attention here, owing to the fact that it can be used for so many different purposes; and being so cheap and simple where it gets out of order, or broken, it can be thrown aside and replaced by a new one. I have broken it to a new use by attaching $\frac{1}{2}$ -inch hose and improved spraying nozzle. It is well adapted to spraying emulsions in nursery—especially citrus nurseries. With me it has proved quite effective.

Buras, La., Feb. 17.

W. S. RODDICK,

THE DOVETAILED HIVE A WONDER FOR CHEAPNESS, AND ACCURACY OF WORK.

I am well pleased with your Dovetailed hive and its fixtures. It is a wonder to me how you can send out so good a hive for the money. Every thing is so true that you can put them up without any trouble. The freight charges were only 82 cts., but the duty was \$2.25. I think your Dovetailed hive is just what I want, for it is for an inside hive, as I use a double hive, and winter on summer stand.

WM. GARFAT.

East Sherbrooke, Quebec, Can., Mar. 1.

LOOK HERE!

Italians and Albinos, or their Cross.

These bees are as fine as can be found in the country, and will be sold as follows:

	MAY.	JUNE.	JULY.	AUG.	TO NOV.
Untested, each. . .	\$ 1.25	\$1.25	\$1.00	\$.75	\$.75
" $\frac{1}{2}$ doz.	5.50	5.50	4.50	4.00	4.00
" 1 doz.	10.00	9.50	9.00	8.00	8.00
Tested, each	2.50	2.50	2.00	1.50	1.50
" two	4.50	4.50	3.75	2.75	2.75
Select tested	3.00	3.00	2.50	2.00	2.00

I have taken C.S. Kildow in partnership, and we will fill all orders promptly. Send for catalogue.

A. L. KILDOW & BRO.,

Sheffield, Ill.

7 9-11-13-15-17d

In responding to this advertisement mention GLEANINGS.

Pure Italian Queens.

We will sell pure Italian queen bees, bred from pure mothers, by April 1. Tested, \$1.00; untested, 50c; two frame nuclei and tested queen, \$2.00, or untested, \$1.50.

I. COOD & STEWART BROS.,

Sparta, White Co., Tenn.

In responding to this advertisement mention GLEANINGS.

Wire Cloth.

For door and window screens, tacking over hives and nuclei for shipping, making bee and queen cages, and a variety of purposes. We have the following list of green and black wire cloth which is not exactly first class, but is practically as good for the purposes mentioned, and at prices MUCH BELOW the ordinary price. You can no doubt select from this list a piece to suit your needs. Price in full pieces, 1 $\frac{1}{2}$ cts. per square foot. When we have to cut it, 2 cts. In case the piece you order may have been taken by some one else before your order comes, please say whether we shall send the nearest in size, or cut one the size ordered at 2 cts. per ft., or give a second or third choice.

No. of Rolls, and Color.	Width, In's.	Length, Ft.	Sq. Feet.	Price of a Full Roll.	Pieces less than 100 ft. long. These figures are the number of square feet in each piece. Multiply by 1 $\frac{1}{2}$ cents for the price of piece.
10 green	8	100	67	\$1.17	65, 65, 64, 63, 63, 62, 54, 40, 33
1 green	10	100	83	1.46	
25 green	12	100	100	1.75	44, green; price 77 cts.
1 green	14	12	14	.25	
2 green	16	100	133	2.33	
1 black	17	100	142	2.47	
1 black	18	100	150	2.62	
5 green	18	100	150	2.62	150 sq. ft., green; price \$2.62
1 black	20	100	167	2.92	110 sq. ft., black; price \$1.92
1 black	22	71	128	2.24	140, 100, 90, 40, 30, 20, 8, green.
9 green	24	100	200	3.50	This is below reg. pr. of 1 $\frac{1}{2}$ c.
1 black	24	100	200	3.50	224, 224, 117, green; 233, black.
64 green	26	100	217	3.50	
18 green	28	100	233	4.08	
6 green	30	100	250	4.37	
3 black	30	100	250	4.37	
14 green	32	100	267	4.67	133, 133, green; price \$2.33
1 black	32	100	267	4.67	253, black; price \$4.43
1 green	34	100	283	4.91	255, black; price \$4.45
14 green	36	100	300	5.25	270, green; price \$4.72
1 black	36	100	300	5.25	150, black; price \$2.62
8 black	38	100	317	5.54	269, black; price \$4.70
3 green	38	100	317	5.54	258, black; price \$4.50
3 black	40	100	333	5.83	317, black; price \$5.54
1 green	40	100	333	5.83	
8 black	42	100	350	6.12	350, green; price \$6.12
1 green	44	100	367	6.42	

A. I. ROOT, Medina, Ohio.



Eaton's Improved SECTION CASE.
BEES AND QUEENS. Send for free catalogue. Address: **FRANK A. EATON,** 2-13db **Bluffton, Ohio.**

☞ In responding to this advertisement mention GLEANINGS.

BROWN LEGHORNS STILL AHEAD. EGGS, \$1.00 PER 13, \$1.50 PER 26. **A. F. BRIGHT, Mazeppa, Minn.** 7tfdb

1890 ITALIAN QUEENS IN MAY, FROM BEES BRED FOR BUSINESS. Each, \$1.00. Six, \$4.50. Order now, pay when queens arrive. **W. H. LAWS, Lavaca, Sebastian Co., Ark.** 7d

☞ In responding to this advertisement mention GLEANINGS.

ITALIAN QUEENS.

Untested, \$1.00; tested, \$1.50; Select, \$2.00. Breeding pure Italians is my specialty. I will try to excel all that mix business and hire help. **F. C. MORROW,** 7d **Wallaceburg, Ark.**

The Georgia Bee & Honey Co.

Has 100 colonies of Italian bees for sale. \$3.50 each, or \$3.00 taking the lot. Address **W. A. PROFFITT,** 7-8d **Hartwell, Hart Co., Ga.**

IF YOU WANT BEES

That will just "roll" in the honey, try **Moore's Strain of Italians**, the result of eleven years' careful breeding.

F. A. Hayes, Farragut, Pa., says:

"I have fifty colonies, and my best bees are from a queen I got of you."

L. C. Clark, Granada, Kan., says:

"They combine gentleness and good working qualities; also white capping of honey. Then, I have never got a hybrid of the 30 or 40 queens I have bought of you."

PRICES FOR 1890.

Wanted queens, in June, \$1.00 each; 3 for \$2.50; after June, 80c each; 3 for \$2.00. Tested queens, in May, \$2.00; June, \$1.75. Strong 3 L. frame nucleus, with warranted queen, in May, \$3.50; June, \$3.00; after June, \$2.50. Safe arrival and satisfaction guaranteed. No foul brood has ever been in my apiary. I am now booking orders for the coming season.

Those who have never dealt with me, I refer to **A. I. Root**, who has purchased of me during the past ten years, 415 queens. Address

J. P. MOORE,

7d **Morgan, Pendleton Co., Ky.**

☞ Money-order office, Falmouth, Ky.

☞ In responding to this advertisement mention GLEANINGS.

JAPANESE BUCKWHEAT.

1 peck, 40 cts.; ½ bu., 75 cts.; 1 bu., \$1.20; 2 bu., \$2.20; 5 bu., \$5.40, delivered free at R. R. or express offices.

Money sent by P. O. order, reg. letter, express money order, or draft on N. Y. city at my risk, otherwise not. Reference, **Wm. Smyth, P. M. of Owego**, and editor of the **Owego Times.** Address 7d

G. B. TALCOTT, Owego, Tioga Co., N. Y.

☞ In responding to this advertisement mention GLEANINGS.

1890 ITALIAN QUEENS. 1890

Six young queens, warranted purely mated, for \$5.00. English rabbits, \$1.00 per pair. Mammoth bronze turkey eggs, 25; 9 for \$2.00. Send for circular. **J. T. WILSON,** 7tfdb **Little Hickman, Ky.**

☞ In responding to this advertisement mention GLEANINGS.

Look Here! Supplies Cheap

Italian and Albino Queens and Bees; Chaff and Simplicity and Nonpareil Hives. Extractors, Smokers, Foundation, Surplus Section Boxes, Root's Perforated Zinc. Price List Free. Write for One. **A. A. BYARD, WEST CHESTERFIELD, CHESTER CO., N. H.**

COMB FOUNDATION.

By April 15th, I shall have 200 lbs. good fresh comb foundation for sale—both brood and surplus; and while as good as the best, I will sell a little below regular prices. Five years' experience in manufacturing. For sample and price address

D. E. BRUBAKER, 7d **Maxwell, Story Co., Iowa.**

EGGS! PURE BRED P. ROCK, LT. BRAHMA, W. & L. WY-ANDOTTE, and BLE. MINORCAS. \$1 FOR 13; \$1.75 FOR 26. 7-8-9d **J. D. BRANDS, P. M., Warrington, N. J.**

To Your Interest.

Before ordering elsewhere write me for price of **Strawberry Plants.** Will spare a few strong 3-frame nuclei on L. wired frames, Italian queen and all, \$2.50. **DAN WHITE,** 7-8d **New London, Huron Co., O.**

Plym. Rock, Wh. and Lac. Wyandott Eggs, \$1 per setting. 7-9-11d **T. G. ASHMEAD, Williamson, N. Y.**

SPECIAL NOTICE.

A part of our goods was destroyed by fire March 12th, necessitating a short delay in filing orders. We have added more machinery, and by running day and night expect soon to ship with our usual promptness. **A. F. STAUFFER & Co.,** 7d **Sterling, Ill.**

SEND your address on postal card for my circular of thoroughbred poultry. **E. J. KENNEDY,** 7-8-9d **Troy, Pa.**

Tested Italian Queens, \$1

With nuclei, containing two or more pounds of bees on one, two, three, or four frames, at 75c per pound. Untested queens, 75c each. See March GLEANINGS. **LUTHER W. GRAY,** 7tfdb **Orlando, Fla.**

☞ In responding to this advertisement mention GLEANINGS.

L. Wyandott — EGGS — W. Leghorn. Thirteen for \$1.00.

P. BROWER, New Paris, Elkhart Co., Ind.

APIARY FOR SALE

At \$5.00 per colony, also **R. C. B. Leghorn eggs,** \$1.00 per 13; prize-winning stock. Address 7-8d **S. F. REED, W. Dorchester, N. H.**

ALSIKE CLOVER SEED.

Retail and wholesale. Ask for price list. 7-8-9d **E. S. HILDEMAN, Ashippun, Dodge Co., Wis.**

FOR SALE:—50 colonies of Italian hybrid bees in Simp. and Heddon hives. \$2 to \$5 per colony.

FOR SALE:—A Given foundation pres, 2 dies.

FOR SALE:—A Young American Lightning-press chase, 4½x6.

Particulars upon application. **J. H. MARTIN,** 7-8d **Hartford, Washington Co., N. Y.**

EGGS! EGGS!! EGGS!!!

READER:—If you want eggs that produce thoroughbred stock, choicest varieties, at Golden Rule prices, write now for my illustrated circulars, free to all. Tenth year. **S. P. YODER,** 7-8d **E. Lewistown, Mahoning Co., O.**

☞ In responding to this advertisement mention GLEANINGS.

EXPERIMENT WITH ALFALFA.

I will send 2 lbs. fresh seed postpaid for 30c. This will drill a plot 80 ft. square. Larger amounts at same rate, while my seed lasts. Can sow up to June 15. 7d **W. C. AIKEN, Lock Box 214, St. Helena, Cal.**

Friends, if you want any **Poland-China Pigs** please write to me and you will be surprised at my low prices and good quality of stock. **N. A. KNAPP, Rochester, Lorain Co., O.**

DADANT'S FOUNDATION

Is kept for sale by Messrs. T. G. Newman & Son, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; O. G. Collier, Fairbury, Nebraska; G. L. Tinker, New Philadelphia, Ohio; E. S. Armstrong, Jerseyville, Ill.; E. Kretchmer, Red Oak, Iowa; P. L. Viallon, Bayou Goula, La.; Jos. Nysewander, Des Moines, Ia.; C. H. Green, Waukesha, Wis.; G. B. Lewis & Co., Watertown, Wisconsin; J. Mattoon, Atwater, Ohio, Oliver Foster, Mt. Vernon, Iowa; C. Hertel, Freeburg, Illinois; Geo. E. Hilton, Fremont, Mich.; J. M. Clark & Co., 1517 Blake St., Denver, Colo.; Goodell & Woodworth Mfg. Co., Rock Falls, Ill.; **E. L. Goold & Co., Brantford, Ont., Can.**; R. H. Schmidt & Co., New London, Wis.; J. Stauffer & Sons, Nappanee, Ind.; Berlin Fruit-Box Co., Berlin Heights, O.; E. R. Newcomb, Pleasant Valley, N. Y.; L. Hanssen, Davenport, Ia.; C. Theilman, Theilmanton, Minn.; G. K. Hubbard, Fort Wayne, Ind.; T. H. Strickler, Solomon City, Kan., and numerous other dealers.

LANGSTROTH on the HONEY-BEE,

REVISED.

The Book for Beginners, the Most Complete Text-Book on the Subject in the English Language.

Bee-veils of Imported Material, Smokers, Sections, Etc.

Circular with advice to beginners, samples of foundation, etc., free. Send your address on a postal to
CHAS. DADANT & SON,
HAMILTON, HANCOCK CO., ILLINOIS.

In responding to this advertisement mention GLEANINGS.

MUST SELL!

50 Colonies Italian Bees at \$5.00 each, f. o. b., in 8-frame L. hives, telescope caps. Most of the combs built on fdn. in wired frames. These bees were very heavy in stores in the fall. Reasons: Can keep only about 25 colonies here in the city, and my business will not allow starting out-apiries. Ship in April or May.

W. E. YODER,
LEWISBURGH, UNION CO., PA.
4tfdb

In responding to this advertisement mention GLEANINGS.

\$6.00 Will Buy in 1890,

One of our Best Hives of Italian Bees with Tested Queen, or 5 for \$25.00.

In Simplicity or L. 10-frame hives; 250 colonies to 4-9db draw from. Address

JNO. A. THORNTON, LIMA, ADAMS CO., ILLINOIS.
In responding to this advertisement mention GLEANINGS.

UNTESTED ITALIAN QUEENS AT \$1,
and 4-frame nuclei at \$3.50, after May 1st. Send in orders now.
4-10db S. J. WAKEFIELD, Autreville, S. C.

The SWARM-HIVER

Sent by mail, and the American Apiculturist one year, \$1.50. Circulars and sample copies free.

Address **AMERICAN APICULTURIST,**
Wenham, Mass.
5tfdb

In responding to this advertisement mention GLEANINGS.

4-FRAME NUCLEI, Tested Queen, Brood, and plenty of Bees, Italians, for \$3.50. Imported queens, \$4. **W. A. SANDERS, Oak Bower, Hart Co., Ga.**

SECTIONS! SECTIONS! SECTIONS!

On and after Feb. 1, 1890, we will sell our No. 1 V-groove sections, in lots of 500, as follows: Less than 2000, \$3.50 per 1000; 2000 to 5000, \$3.00 per 1000. Write for special prices on larger quantities. No. 2 sections at \$2.00 per 1000. Send for price list on hives, foundation, cases, etc.

J. STAUFFER & SONS,
Successors to B. J. Miller & Co.,
Nappanee, Ind.

In responding to this advertisement mention GLEANINGS.

FOR THE SEASON OF 1890.

Headquarters in the South.

TWELFTH ANNUAL CATALOGUE NOW READY.

A steam-factory exclusively for the manufacture of Bee-keepers' Supplies.

ITALIAN QUEENS.

Tested, ready in March. Untested, by April 1st. Contracts taken with dealers for the delivery of a certain number of queens per week, at special figures.

FOUR-FRAME NUCLEUS,

with pure Italian queen, containing 3 pounds of bees when secured, in April and May, \$4.00; after, 25 cts. less. Safe arrival and satisfaction guaranteed on all queens and nuclei.

For more particulars, send for Twelfth Annual Catalogue.

P. L. VIALLON,

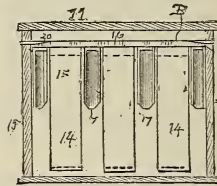
Bayou Goula, Iberville Parish, La.

TAKE NOTICE!

BEFORE placing your Orders for **SUPPLIES,** write for prices on One-Piece Basswood Sections, Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc. Address

R. H. SCHMIDT & CO.,
21-20db NEW LONDON, Waupaca Co., WIS.

In responding to this advertisement mention GLEANINGS.



By the use of my improved spacer, an ordinary hanging frame hive is converted into a reversible or movable hive. A hive is quickly and correctly spaced, and the frames are held in their proper position, and will not be lifted when removing the cover if they are fastened

to it by brace-combs. A contracted hive is made movable or invertible. In adopting this, it requires no change in a hanging-frame hive.

Price of Brood-Chamber and 8 frames..... \$1.50
One Hive and 1 doz. extra spaces..... 4 00

In ordering state what frames you use, and give the width of your hive, inside. 6-11db
J. B. WILCOX, MANISTEE, MICH.

In responding to this advertisement mention GLEANINGS.

SEEDS. Six pkts. of my choicest Flower Seeds, 10c. Beautiful catalog free. **F. B. MILLS, Thorn Hill, N. Y.**

FOR FOLDING PAPER BOXES send to

4-8db **A. O. CRAWFORD, S. Weymouth, Mass.**

PURE ITALIAN BEES & QUEENS.

Full colonies and nuclei, per frame, 60c. Tested queens, \$2.00; after June 1, \$1.50. Untested queens, \$1 00; after June 1, 75c. Remit by postoffice money order, registered letter, or draft on New York. For any other information, address

C. W. JONES & CO.,
4-9db Bryant Station, Maury Co., Tenn.
In responding to this advertisement mention GLEANINGS.

THE BEST THING OUT FOR GETTING BEES OUT OF SUPERS.

The Dibbern Bee-Escape.

Get a pattern, and be sure you have it just right. Now perfect. Tinned wire cloth, soldered on tin. Instantly removable. Sample cone by mail, 35c. Complete board, express, 50c.

5-7 9d **C. H. DIBBERN, Milan, Ill.**
In responding to this advertisement mention GLEANINGS.

CARNIOLAN QUEENS AND BEES.

I make this race of bees a specialty. Untested queens after June 1st, \$1.00 each. Send for circular and price list to
A. L. LINDLEY,
6tfdb Jordan, Ind.

BURPEE'S SEEDS BEST

ARE THE

it is possible to produce by constant, most critical care, and are **WARRANTED**, few equal and none better. Handsomely illustrated **CATALOGUE**, with colored plates painted from nature, of **RARE NOVELTIES** of sterling merit, mailed **FREE** to any address.



W. ATLEE BURPEE & CO., Philadelphia, Pa.

In responding to this advertisement mention GLEANINGS.

FOR SALE!

One of the best located apiaries in Iowa, 150 Colonies, in Langstroth hives. Handsome two-story frame residence. Twenty acres land. All necessary out-buildings. Also fine flock White Wyandottes. Two cows, nice span driving horses. Never a failure of honey. White clover, basswood, golden-rod, buckwheat, etc. House nearly new, nicely decorated paper, a very pleasant home. Price \$2500.

C. A. SAYRE,
Sargent, Floyd Co., Iowa.

In responding to this advertisement mention GLEANINGS.

OWING to rising prices of beeswax we now quote an **Advance of 5 cts.** on comb foundation over February prices, both wholesale and retail. **Beeswax Wanted** in any quantity. 6-7 8d

DADANT & SON, Hamilton, Hancock Co., Ill.

H. G. FRAME, NORTH MANCHESTER, INDIANA,
Breeder of Italian and Carniolan Queens. Bees by the pound and nucleus. Price list free.
5tfdb Reference First National Bank.

SUPPLIES!

Send for circular—free. **WALTER S. POWDER,**
175 E. Walnut St., Indianapolis, Ind.
5tfdb (Successor to F. L. Dougherty.)

HOME **ENTERTAINMENT**—**AGENTS** wanted everywhere, for the **HOME JOURNAL**—a grand family paper at \$1 a year. *Big cash premiums.* Sample **FREE.** **THOS. G. NEWMAN & SON,**
246 East Madison Street, - CHICAGO, ILLS.

Cash for Beeswax!

Will pay 24c per lb. cash, or 27c in trade for any quantity of good, fair, average beeswax, delivered at our R. R. station. The same will be sold to those who wish to purchase, at 30c per lb., or 35c for best selected wax.

Unless you put your name on the box, and notify us by mail of amount sent, I can not hold myself responsible for mistakes. It will not pay as a general thing to send wax by express.

A. I. ROOT, Medina, Ohio

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines last winter 50 chaff hives with 7-inch cap, 100 honey-racks, 500 broad frames, 2,000 money-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it all with the Saw. It will do all you say it will."

Catalogue and Price List Free. Address **W. F. & JOHN BARNES,** 545 Ruby St., Rockford, Ill.

When more convenient, orders for Barnes' Foot-Power Machinery may be sent to me. A. I. ROOT.
23tfdb

VANDERVORT

COMB FOUNDATION MILLS.

Send for samples and reduced price list.
1fd **JNO. VANDERVORT** Laceyville, Pa.

TESTED

CARNIOLAN QUEENS.

We have just purchased all the tested Carniolan queens that John Andrews, of the late firm of Andrews & Lockhart, is now wintering in his 100 colonies. These queens are to produce no bees showing any yellow bands, and are to be shipped in May. Any one in need of a nice breeding queen early in the season should correspond with us; and any interested in these bees should read description in our illustrated catalogue, sent free on application. Address

THE BEE-KEEPERS' ADVANCE, Mechanic Falls, Maine.

5-7d In responding to this advertisement mention GLEANINGS.

2 SIMPLICITY BEE-HIVES, 2 covers, 1 T super and 56 sections, in flat, \$1.25. All kinds of hives and extractors made to order.
5 7d **T. A. GUNN,** Tullahoma, Tenn.

READY to Mail, tested Italian queens cheap, from imported mothers. Untested in season. Send for circular. **SIMON P. RODDY,** Mechanicstown, Md.
5-7-9d

BEAUTIFUL BEES are always pleasing to the eye. GOOD QUALITIES are always profitable.

If you want Bees and Queens that combine beauty and good qualities to a marked degree, write for circular giving low prices. No circulars sent out unless applied for. **CHAS. D. DUVALL,**
5tfdb **Spencerville, Mont. Co., Md.**

In responding to this advertisement mention GLEANINGS.

ENGINES, SIMPLE AND COMPOUND.

We have been having built, specially for bee-hive work, a superior grade of engines. They are heavier, and better built, steel and wrought iron being used in several of its parts where cast iron is ordinarily used on ordinary trade engines. Our prices are as low as can be obtained on engines of an inferior grade. Prices: Simple engines, without boiler, 2½-horse-power, \$75.00; 5 horse-power, \$100; 7½-horse-power, \$125; 10-horse-power, \$150. Compound engines, without boiler, 2-horse-power, \$100; 4-horse-power, \$133; 6-horse-power, \$167; 8-horse power, \$200. The above prices include lubricators, throttle-valves, and governor belt. In our compound engines the steam is used over again in a larger cylinder, thus economizing fuel, and these in small powers you will not be likely to get elsewhere. We have tested these engines thoroughly, and they give us good satisfaction. On engines and boilers combined, write for prices. For further particulars write us.
A. I. ROOT, Medina, O.

A Four-Color Label for Only 75 Cts. Per Thousand!

Just think of it! we can furnish you a very neat four-color label, with your name and address, with the choice of having either "comb" or "extracted" before the word "honey," for only 75 cts. per thousand; 50 cts. per 500, or 30 cts. for 250, postpaid. The size of the label is 2¼ x 1 inch—just right to go round the neck of a bottle, to put on a section, or to adorn the front of a honey-tumbler. Send for our special label catalogue for samples of this and many other pretty designs in label work.

A. I. ROOT, Medina, Ohio.

SEE OUR PRICES.

(We do not publish them here, but they are low.)

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.,

Manufactures all *STYLES* of *HIVES*, *SECTIONS*, *SHIPPING-CRATES*, Etc. Also Dealers in *BEE-KEEPERS' SUPPLIES* of all Kinds. A *LARGE STOCK* kept Constantly on Hand, Ensuring *PROMPT SHIPMENT*.

→ **SEND LIST OF WANTS, FOR SPECIAL ESTIMATE.** ←

*—**WE CAN NOT BE UNDERSOLD.**—*

→ **NEW * ILLUSTRATED * CATALOGUE * AND * PRICE * LIST * FREE.** ←

Drop us a Card with Your Name on. Mention Gleanings.

REMOVED, from Coburg to RED OAK, IOWA, my entire factory for
BEE SUPPLIES. We have the largest steam-power shops in the West, exclusively used to make *EVERYTHING* needed in the Apiary, of practical construction and at the *LOWEST PRICES*. Italian bees, queens, 12 styles of Hives; Sections, Honey-Extractors, Bee-Smokers, Feeders, Comb Foundation, and everything used by bee-keepers, always on hand.
Wholesale and Retail. 40-page Illustrated catalogue FREE to all. 4tfdb Address **E. KRETCHMER, Red Oak, Iowa.**
In responding to this advertisement mention GLEANINGS.

CARNIOLAN QUEENS,

BRED FROM AMBROZIO AND BENTON
Imported 1889 Queens.

Circular of Supplies | **J. B. Kline's Apiary,**
and Queens. 7-13d **Topeka, Kas.**

In responding to this advertisement mention GLEANINGS.

Western Bee-Keepers' Supply House

Root's Goods can be had at Des Moines Iowa, at Root's Prices. The largest supply business in the West. Established 1885. Dovetailed Hives, Sections, Foundation, Extractors, Smokers, Veils, Crates, Feeders, Clover Seeds, etc. Imported Italian Queens. Queens and Bees. Sample copy of our Bee Journal, "The Western Bee-Keeper," and Latest Catalogue mailed Free to Bee-keepers.
JOSEPH NYSEWANDER, DES MOINES, IOWA.

In responding to this advertisement mention GLEANINGS.

J. C. SAYLES,

HARTFORD, WIS.,

Manufactures Apiarian Supplies of Every Description. Catalogue Free to All.
3tfdb Send Your Address.

In responding to this advertisement mention GLEANINGS.

Established 1878.

SMITH & SMITH,

Wholesale and Retail Manufacturers of

BEE-KEEPERS' SUPPLIES.

KENTON, OHIO.

Price List Free. Mention Gleanings.

Wait! Eggs! At half price from prize-winning Light Brahmas and Laced Wyandottes, \$1.50 per clutch, after April first. No stock for sale until fall.
SIGEL F. GROSS, Atwood, Ill.

GUARANTEED FOUNDATION
For Sale Cheap. Write for prices.
E. R. MILLER,
Garden City, Cass Co, Mo.

-7 9d

IMPORTED QUEENS.

In May and June, each, - - - - - \$2 00
In July and August, each, - - - - - 1 80
In September and October, each, - - - - - 1 40

Money must be sent in advance. No guarantee on shipments by mail. Queens sent by express (8 at least), which die in transit, will be replaced if returned in a letter.

1-11d **CHAS. BIANCONCINI, Bologna, Italy.**

QUEENS! EARLY! QUEENS!

Italian queens promptly shipped after March 15. Tested queen.....\$2 00 | Untested\$1 00
Three Untested Queens.....\$2 75

Two-frame Nucleus with Untested Queens after April 1st, \$2.50. We use the Simp. frame, and guarantee safe arrival, etc. Circulars free. Make money orders payable at Clifton. Address 5tfdb **COLWICK & COLWICK, Norse, Bosque Co., Texas.**

In responding to this advertisement mention GLEANINGS.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD-FRAMES.

THIN FLAT - BOTTOM FOUNDATION

Has No Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.



J. VAN DEUSEN & SONS,

Sole Manufacturers, 5tfdb
Sprout Brook, Montgomery Co., N. Y.

In responding to this advertisement mention GLEANINGS.

CARNIOLANS.

We make Carniolan bees and queens a specialty. See our prices before placing your orders. Our stock of Carniolans can not be excelled by any. Descriptive circular and price list for 1890 now ready. Write for it. Address **F. A. LOCKHART & CO.,** 5tfdb (Formerly of Andrews & Lockhart.) Pattens Mills, Wash. Co., N. Y.

In responding to this advertisement mention GLEANINGS.

"HANDLING BEES." Price 8 Cts.

A chapter from "The Hive and Honey Bee, Revised," treating of taming and handling bees; just the thing for beginners. Circular, with advice to beginners, samples of foundation, etc., free. 5tfdb **CHAS. DADANT & SON,** Hamilton, Hancock Co., Illinois.

In responding to this advertisement mention GLEANINGS.